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SMITHSONIAN CONTRIBUTIONS TO KNOWLEDGE.

ARCHÆOLOGY

OF THE

UNITED STATES.

OR

SKETCHES, HISTORICAL AND BIBLIOGRAPHICAL, OF THE PROGRESS OF
INFORMATION AND OPINION RESPECTING VESTIGES OF
ANTIQUITY IN THE UNITED STATES.

BY

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COMMISSION
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INTRODUCTORY NOTE.

THE adventurous activity of the people of the United States, joined to a wandering propensity, partly national and partly characteristic of the age, has left few, if any, considerable portions of the country unexplored. The emigrant overtakes the government surveyor, and railroads and other improvements advance with equal rapidity in the steps of the latter. It would be difficult to point out upon the map a section of much extent, however secluded, that has not been traversed by intelligent observers, taking note of the quality of its soil, its vegetable and mineral productions, and whatever else would contribute to an appreciation of its resources. In these expeditions, often conducted by topographical engineers, and accompanied by naturalists constantly looking out for objects of interest, it is hardly to be supposed that vestiges of ancient art would fail to attract attention. We can therefore anticipate little of novelty hereafter in that class of discoveries, and now that the peculiar earthworks of Wisconsin have been carefully investigated, it may reasonably be inferred that all the prominent varieties of aboriginal remains, which are found in the United States east of the Rocky Mountains, have been more or less minutely described.

The memoir of Messrs. Squier and Davis, constituting the first volume of the "Smithsonian Contributions," although entitled "Ancient Monuments of the Mississippi Valley," and mainly devoted to the antiquities of that extensive region, yet aimed to embrace within its scope all that was known of similar vestiges north of the Gulf of Mexico. Hence, the writers added to their own materials the results of previous and contemporary researches in other parts of the United States, as well as that to which their personal observations were confined. Their treatise contains a faithful and able exposition of the subject, corrects many errors previously entertained, and defines and classifies the information collected with great clearness and particularity.

In the second volume of the "Contributions," again under a limited title, that of the "Aboriginal Monuments of the State of New York," Mr. Squier has extended his private explorations to the aboriginal relics of that State, and, in an ample appendix, has once more gone over the whole ground, for the purpose of presenting a general view of the characteristics of such antiquities in the United States, and comparing them with analogous remains in other countries. Some of his former opinions respecting the earthworks in that section are changed or modified, and the fruits of much inquiry and mature study are brought to bear upon the question of the origin and use of the various structures.

Thus, without looking beyond the publications of this institution, we have a fund of materials, of recent compilation, for a clear understanding of the nature of these remains, and a proper estimation of the kind and degree of archæological interest attached to them.

We have also other and distinct sources of information and opinion not comprehended, or only partially considered, in those volumes; some relating to the character and design of existing monuments, and others to the origin and peculiarities of ante-Columbian population in the country. Among the latter are vocabularies of the native languages, analyzed and compared by able philologists. Mr. Gallatin, especially, in his elaborate essay published by the American Antiquarian Society, and in later communications to the American Ethnological Society, has enlarged the range of that branch of inquiry, and poured a flood of light upon the subject by an acute and philosophical analysis of the subtleties of grammatical construction; the late eminent physiologist, Dr. Morton, has, in his speciality, examined the analogies belonging to the physical attributes of the American races; Mr. Schoolcraft has collected the miscellaneous results of his protracted study of the past and present history of the aborigines into the magnificent quartos published at the expense of our national government; and these are only some of the prominent writers who have studied the subject in one or another of its aspects. A mass of information has thus accumulated, gathered from our whole territory by intelligent and comparatively recent observers.

The present may therefore be a favorable occasion for introducing a retrospective view of the progress of opinion and information concerning the ethnological position and social advancement of the people by whom our soil was occupied in ages beyond the reach of history. The way would then be prepared for an estimate of the real knowledge, thus far obtained, of the customs, arts, and civil condition of those mysterious races.

This inquiry involves the necessity of referring to early hypotheses concerning the origin of American population which embrace the whole of both continents, although little beyond a mere allusion to the prolific themes of controversy they have generated is permitted by the limits to which this paper is restricted.

CHAPTER I.

GENERAL OPINIONS RESPECTING THE ORIGIN OF POPULATION IN THE NEW WORLD.

AFTER the discovery of America, the minds of the learned and ingenious were much exercised to account for its habitation by men and animals. On the presumption that all the varieties of the human race were descended from a single pair, and that after the flood the earth was indebted solely to the ark of Noah for the replenishment of man and beast, the manner in which these reached the western world became to scholars and divines a subject of anxious inquiry. The complete isolation of the newly-discovered land was not, it is true, immediately suspected; and Columbus and Vespuccius both died in the conviction that they had only touched on portions of Asia. Indeed, so late as 1533, it was maintained, by the astronomer Schöner, that Mexico was the *Quinsai* of Marco Paulo. But when this was ascertained to be a vast continent by itself, separated by broad oceans or by frozen barriers from the rest of the globe, the solution of the mystery of population became a matter of intense philosophical interest; and the materials relied upon for such a solution, drawn from sacred and profane history, and the writings of ancient philosophers, poets, and geographers, were employed to sustain a great diversity of opinions. As these materials have continued to be reproduced in various combinations, and the hypotheses they suggested are constantly repeated by modern theorists, it becomes essential to an understanding of the subject, not only as formerly regarded, but in its existing position, that they should be succinctly enumerated.

While most authors have been content to go no further back in their speculations than the period of the division of the earth among the descendants of Noah, there are others who take a less limited flight, and assume a still earlier date for the peopling of America. It has been held that the earth before the flood was one mass of land, and that, when this was broken at the deluge, Providence made provision to save a remnant of people in every country, although we have accounts of what happened in one continent only.¹ It has been argued, from differences in the animal kingdom, many of whose species would not survive transportation, that they must have been originally bred where they are found; and it has been maintained that, according to the prevailing traditions of antiquity, Paradise was without the eastern continent, and beyond the ocean.²

¹ Burnett's "Theory of the Earth," Lond., 1684.

² Ibid.

What the prolific fancy of Paracelsus suggested, among the bold assumptions of his peculiar genius,¹ and Voltaire, Lord Kames, and others, have argued upon general philosophical principles, some naturalists are now attempting to deduce from observation, viz: that the races of men and animals were severally created in the regions which they inhabit. A distinct and intimate connection is asserted to exist between the *fauna* of different latitudes and the races of men associated with them. The diversity and distribution of men and animals were a stumbling-block to early writers, which but few ventured to overleap by explanations deemed inconsistent with sacred history. If we may judge from the tendency of recent publications, we must be prepared for the readvancement of an ancient theory, now based upon geological phenomena, the structure of native dialects, and other scientific data, which would give the New World precedence of the Old one, as sooner prepared for the occupancy of human and brute creation, and as actually inhabited at a more remote period.²

The plausible theory of an original communication between the two continents by means of lands now submerged in the Atlantic, has always found numerous supporters. A belief has also prevailed that without such means of transmission, emigration took place from Africa to America before the flood.³

Passing from the question of an antediluvian population on the American Continent, supposed, moreover, to be indicated by Mexican traditions, we meet with writers who imagine they discover evidences of settlement in this country by the immediate descendants of Noah. For example, it has been advanced by biblical critics that Juctan, or Joctan, son of Heber, founded a city in Peru; and that colonies were planted by Ophir and Johab his sons. It was a belief entertained by distinguished Hebrew scholars, that Ophir, to which land of gold the ships hired of the Tyrians by Solomon, sailed on a three years' voyage, must be in America.

Tornielli, the annalist, was of opinion that the descendants of Shem and Ham passed to America by way of Japan.

From some supposed resemblance of religious rites, Gomara, De Lery, and Lescarbot,⁴ who had opportunities of personal observation in America, and in different regions, concluded that the natives were descended from the Canaanites whom Joshua compelled to seek a new habitation; a theory which, in later times, and upon different grounds, seemed to President Stiles, of Yale College, the most probable of any that had been advanced.

¹ "Omnium Stultitiam Theophrastus Paracelsus exhaustit, qui duplicem Adamum, alium in Asia, in America alium creatum asserit."—*Hornius de Originibus Americanis*, Lib. I., Cap. 2.

² "Types of Mankind," by Messrs. Nott and Gliddon, Ch. IX., p. 271, *et seq.*

³ "Opus Chronographicum ab orbe Condito" of Peter Opmeer, Anvers, 1611.

⁴ Francesco Lopez de Gomara, professor of rhetoric, who came to Mexico to prepare his history of its conquest. Jean de Lery, a French Calvinist, who was sent to aid Villegnanon in establishing a protestant colony in Brazil, in 1556-7. An English translation of his account of Brazil was printed in 1611. Mark Lescarbot, advocate of the parliament of Paris, who aided in forming the first French establishment in Canada, and wrote "Histoire de la Nouvelle France," Paris, 1609.

But of all opinions having their foundation in sacred history, that which traces the origin of our Indian tribes wholly, or in part, to the lost ten tribes of Israel, has found the warmest and most numerous supporters. It is among the oldest hypotheses, has been supposed to find the strongest corroboration in the customs and traditions of the Indians, and has been continually discussed to the present time. The four principal grounds on which the argument in its favor rests, are: 1st, that the ten tribes, on being carried into captivity by Psalmanazar, were established in the northeastern provinces of the Assyrian Empire, from whence they disappeared in a direction towards that part of Asia which is nearest to America, the point from whence some kind of emigration is commonly believed to have taken place; 2d, that the book of Esdras, classed among the Apocryphal Scriptures, but regarded as possessing claims to historical authenticity, speaks of the tribes as having resolved to go forth *into a further country where never man dwelt*, and as *passing over the waters into another land*, &c.; 3d, that many of the customs of the Indians indicate a Hebrew origin; 4th, that numerous Hebrew words and idioms are found in the languages of the latter. Genebrard and Andrew Thevet were among the early writers who traced the lost tribes in America. But a new and more vigorous impulse was given to this course of investigation in the succeeding century, when the labors of Mayhew and Eliot for the conversion of the natives in New England began to excite much interest abroad, where a belief prevailed that the restoration of the Jews was at hand. Thomas Thorowgood, a member of the Assembly of Divines, published in 1650 a book entitled "Jews in America, or probabilities that the Americans are of that race." This was first circulated in manuscript, and attracted the attention of John Dury, a divine of some celebrity, who wrote urging its publication, and communicated two remarkable stories he had heard in Holland, that were printed with it. The first story was of a messenger from the ten tribes, who had made his appearance in Palestine to inquire after the remnant that remained when they themselves were carried into captivity. The other was the narrative of Antonie Monterinos, who professed to have found a community of Jews in Peru, by whom he had been entertained for several days. This had been sworn to before Manasseh Ben Israel, the chief Rabbi, at Amsterdam, who testified to the good character of Monterinos. The inquiries of Dury induced Manasseh Ben Israel to write his well known treatise, "The Hope of Israel," in which he endeavored to prove that the Israelites were "the first finders out of America." It appears to have been from these sources that Mayhew, Eliot, Roger Williams, and other New England preachers of Christianity to the children of the forest, received impressions concerning the descent of the Indians from the Jews, which their own observations tended to confirm.¹ The Mathers, Samuel Sewall, and most of the prominent scholars and theologians of Massachusetts, were inclined to the same opinion, which has never failed to find supporters. The Earl of Crawford and Lindsay, who, as

¹ Dury was a friend and correspondent of the New England Clergy, and when the letters from Eliot and others, giving an account of the progress of the gospel among the Indians, were printed in London, he added an appendix, in which he gives some reasons for believing the Indians to be descended from the Jews. This was previous to Thorowgood's publication.

an officer of the British army during the war of the Revolution, was much among the Indians, wrote a tract on the subject. Adair, the distinguished Dr. Elias Boudinot, Rev. Ethan Smith, the late M. M. Noah, Lord Kingsborough, and Mrs. St. Simon, continue the series of persevering advocates of that view of the question.

Profane history and the ancient classics, have suggested more numerous, if not more plausible conjectures, respecting the origin of the Americans. Vague intimations derived from that mysterious repository of primeval lore, the Egyptian Priesthood, have been supposed to warrant a belief in the former existence of a seat of arts and empire now buried beneath the Atlantic Ocean. Of these the most distinct is recorded in the *Timæus* of Plato as having been related to Solon, about six hundred years before Christ, by a priest of a temple in the Delta. This keeper of the secrets of the past, looking down, as it were, from a superior antiquity, tells Solon that the Greeks are ever children; that an air of youth is visible in all their histories; while in the Egyptian temples are the records of ages and nations long buried in oblivion. He proceeds to inform him that there have been innumerable deluges and conflagrations of the regions of the earth; some of them faintly shadowed in the fables and mutilated traditions of the Greeks. In one of these the great Island of Atlantis, larger than Lybia and Asia together, was submerged in the ocean that inherits its name. This island was stated to be opposite the Straits of Gades (Gibraltar), and its inhabitants extended their sway over all the adjoining regions, until checked by some ancestors of the Athenians.

Allusions to this lost island, or continent, are frequent in Greek and Roman authors, and it is not supposed to be a fiction of Plato's devising. Buffon believed in the probability of the story; and Bailly, in his "*Lettres sur l'Atlantide de Platon*," maintains its reality by the additional authorities of Homer, Sanchoniathon, and Diodorus Siculus. Whether the island was in fact submerged, or simply the means of communication with it lost, has been a question much discussed. Various islands have been assigned as its locality, and even regions in the north of Europe connected with the main land. Many supposed it to be America. According to Plato, there were first smaller islands from which there was an easy passage to the larger one, or continent, beyond. The theory of a chain of islands, with slight intervals, if not a solid body of land, quite across both the Atlantic and Pacific Oceans, is supposed, by some modern writers, to be geographically sustained.

The celebrated lines in the "*Medea*" of Seneca, who lived about the time of our Saviour, have been received as indicating either a ray of traditionary light or a prophetic inspiration.¹ Humboldt and Bishop Horsley have shown how slight are

¹ Venient annis sæcula seris
 Quibus Oceanus vincula rerum
 Laxet, et ingens pateat tellus,
 Tethysque novas detegat orbes,
 Nec sit terris ultima Thule."

their claims to the latter construction.¹ They were doubtless an accidental, and not unnatural, though very felicitous stretch of a poet's fancy.

Another remarkable passage is in the "Varia Historia" of Aelian, where Silenus is represented as saying to Midas, King of Phrygia, that Europe, Asia, and Africa are surrounded by the ocean; and that beyond there is a great continent sustaining huge animals, and men larger and longer lived than their own. There were, he said, great states, various institutions and laws, unlike those of Phrygia, and the land possessed an abundance of gold and silver, which the people regarded less than the Phrygians did iron.

To these ancient references to lands in the Atlantic, far removed from the European shores, may be added the story of the mythological Hesperides, which Lescarbot believed to be the Antilles of the Gulf of Mexico; the island called Antilla, mentioned by Aristotle as having been discovered by the Carthaginians; the very large island described by Diodorus Siculus as many days' sail from Africa, abounding in mountains and navigable rivers, which the Carthaginians wished to conceal from the rest of the world, as a place of retreat in case of misfortune to their city; and the story of Pomponius Mela of certain Indians being cast on the German coast, who were given to Metellus Celer by the King of the Suevians.² Nor must the tradition of the island of the Seven Cities be omitted, where, on the conquest of Spain and Portugal by the Moors, seven bishops, and a multitude of followers, escaping in ships, accidentally landed, concerning whom rumors reached Portugal in the time of Prince Henry.

There are records, bearing marks of authenticity, of voyages made by the commercial inhabitants of the African shores of the Mediterranean, that are deemed to indicate a degree of maritime skill and enterprise rendering possible a knowledge on their part, not only of the Canaries, the Cape Verde Islands, and the Azores, but also of the Antilles, and even the continent of America; and many theories of the origin of population here have been based upon them which are adhered to by various recent writers.

The first in order of time is that, so celebrated, of Hanno, the Carthaginian, many centuries before Christ, and related by himself in what is called "the Periplus of Hanno." Efforts have been made to prove the Periplus a spurious production; but Robertson considers its authenticity established by unanswerable arguments.³ According to Pliny, Hanno sailed from the Straits of Gibraltar around Africa to Arabia. Bougainville, Gosselin, and other commentators, have endeavored to trace his course, step by step; and the latter affirms that all the authorities, not-

¹ *Examen Critique*, I. 162, *et seq.*; Horsley's Sermons, II. 44. Yet Humboldt says:—

"When Strabo tells us that in the Atlantic Ocean, in that part of the northern hemisphere which is not occupied by our habitable land, there may exist another habitable earth, or even many, above all in the parallel of Thineæ, which is that of the widest part of the continent of Europe and Asia, he prophesies, that is to say he divines, as seems to me, the discovery of America, and the Isles of the South Sea."—*Humboldt, Examen Critique*, I. 165.

² Aristotle *De Mirabilibus Auscultationibus*, Cap. 84, p. 836; Diodorus Siculus *De Fabulosis Antiquorum Gestis*, Cap. 84, Lib. 6, p. 331; Humboldt, *Exam. Critique*, I. 130–131.

³ *Hist. of America*, I., note to p. 13.

withstanding apparent contradictions, bring us to the same result, and fix the limit of his voyage near Cape Non, or Cape Bajador.¹

The next expedition is that of some Phœnicians, whom Pharaoh Necho, about 604 B. C., dispatched from a port in the Red Sea, with orders to return through the Pillars of Hercules. This they are said to have accomplished in somewhat less than three years. The account in Herodotus is quite circumstantial, and, although much controverted, is received as correct by Humboldt, who cites Rennell, Heeren, Sprengel, and a more recent writer of great repute, Etienne Quatremère, in its favor, and adds that the command of Necho implies a previous knowledge of the possibility of such a navigation.² It is stated, moreover, by Pliny, from Cornelius Nepos, that one Eudoxus, a great sailor, in the reign of Cleopatra, "at the time he fled from King Lathyrus, departed out of the Arabian Gulf, and held on his course as far as Gades" (Gibraltar). Not much weight, however, is given to this story by reliable authorities.³

It will be seen that, if it is once admitted that Phœnicians, Carthaginians, or Tyrians, actually sailed around Africa, their knowledge of the islands opposite to its western shores may be presumed, as they would almost of necessity be driven near them by the well-known courses of the winds. By the same means, in case of a tempest, they might be carried still further to the westward, and to the American coast. It was thus that Brazil was discovered in A. D. 1500, by Pedro Cabral, while on his way from Portugal to the East Indies. A fact, which, like the wreck of a Japanese junk at the mouth of the Columbia River in 1833, substantiates the possibility of such occurrences in more ancient times.⁴ It was on the coast of Brazil that the Pilot, who is alleged to have preceded Columbus in the passage of the Atlantic, was by some reported to have been cast.

And this brings us to the last class of narratives, viz: those which are adduced to show that Columbus was not entitled to the credit of original discovery, but may have been indebted to other navigators who preceded him for a knowledge of the existence of western lands far beyond the limits of ordinary communication.

Many persons find it difficult to realize that things so simple, as great truths uni-

¹ Irving's *Columb.* III., Appendix No. 14.

² *Cosmos*, II. 127, note.

³ Reinholdt Foster says: "The Phœnicians sent out for the purpose, by the Egyptian king and conqueror, *Sesostris*, and his father, Amasis I., gradually discovered the coasts of all Africa.

The third epocha of the circumnavigation of Africa fell in the time of Solomon, nearly five hundred years later. Three hundred and eighty years after this Necho gave orders for the circumnavigation of Africa to be performed; and, in the reign of Ptolemy Euergetes II., one Eudoxus sailed once more round Africa, which is four hundred and fifty years later than the voyage of Necho; and yet, in Strabo's time, many people doubted of the possibility of making the tour of Africa by sea."—*Voyages and Discoveries in the North*, p. 7, n.

See also Jeremy Belknap's Dissertation on the Circumnavigation of Africa by the Ancients, attached to his Discourse in Commemoration of the Discovery of America by Columbus, before the Massachusetts Historical Society, Oct. 23, 1792.

⁴ Gumilla, in his *History of Orinoco*, states that, in December, 1731, a batteau, from Teneriffe, bound for the Canaries, was driven upon the South American coast, near the mouth of the Orinoco. Tome II. p. 208.

versally are, should remain for ages entirely concealed from mankind; and a successful enterprise is often reluctantly admitted to have proceeded from the original conceptions and intuitive sagacity of its author.¹

Partly perhaps upon this principle, and it may be somewhat stimulated by national jealousy, statements prejudicial to the claims of Columbus were early circulated, and have been since repeated as entitled to belief, or have undergone investigation as questions of scientific interest.

Thus Oviedo, in his history of the Indies, printed A. D. 1535, mentions, but as a rumor merely, that about the year 1484, a certain pilot, in one of his customary voyages, was driven by a violent storm to an unknown land, and on his return was received, with a few survivors of his crew, into the house of Columbus, where they died, leaving their papers in his hands. This, although disregarded by contemporary authors, was brought forward against Columbus, in 1552, by Gomara, a writer not esteemed entirely trustworthy;² and, one hundred and twenty years after the event, was seriously narrated by Vega, in his commentaries of Peru. Vega gives the name of the pilot and the number of his crew, with many other details, which he professes to have heard when a child. He refers for confirmation to Gomara, and also to Acosta, who, in 1591, slightly noticed the circumstance. It is a good illustration of the manner in which a tale expands and develops itself in the process of transmission. The fact that Columbus communicated his idea of discovery ten years before the assigned date of the occurrence is believed to be well established.³ The same tendency to expansion is exhibited in the case of the claim that, at a still earlier period, about 1464, John Vaz Casta Cortereal, a gentleman of the royal household of Portugal, explored the northern seas by order of Alphonso 5th, and discovered the Terra de Baccalhaos, or land of codfish, afterwards called Newfoundland. The descent of this remarkable statement is traced, by the author of a memoir of Sebastian Cabot, from Cordeyro, an obscure Portuguese writer, of the date of 1717, to "Barrow's Chronological History of Voyages," and from thence to "Lardner's Encyclopedia," as a reliable fact, and to the "Edinburgh Cabinet Library," where the event is spoken of as happening "*nearly a century* before the celebrated voyages of Columbus and Cabot!"⁴

The uncertain expedition of the eight Arabian brothers, who, it is related, some time previous to 1147, sailed from Lisbon, and "swore they would not return till they had penetrated to the farthest bounds of the DARK SEA,"—which resulted in the discovery of an island inhabited by a people of lofty stature and a red skin—has by some writers been extended to the Coast of America; but the better opinion seems to be that the island referred to was one of the Canary group.⁵

¹ En un mot, Colomb n'est point du tout un génie transeendant, une espèce de prophète, qui ait deviné le nouveau monde, c'est tout bonnement un navigateur instruit et courageux, c'est le Cook de son siècle. Son mérite réel est trop grand pour qu'il ait besoin d'une gloire imaginaire.—Géographie Mathématique de Mentelle et Malte Brun. Tome XIV. p. 8, n.

² Irving's Life of Columbus, III. Appendix, No. 11.

³ Humboldt's Examen Critique, I. 12.

⁴ Biddle's Memoir of Sebastian Cabot, Book ii. ch. xi.

⁵ N. A. Review, XLVII. 178.

In the History of Wales, translated by Dr. Powell from the original British of Caradoc of Lhancarvan, is the foundation of the story of Madawc ap Owen Gwynedd, who, about 1170, as it is represented, sailed westward with a small fleet of ships, and leaving Ireland on the north, came at length to an unknown country, where he left a part of his followers, and returning home for more, bade a final adieu to his native land, and sailed again with ten ships.

Concerning this country, Humphrey Lloyd, the first translator of Caradoc, says (and from him Hakluyt has adopted the expression): "It must of necessity be some part of that vast tract of ground of which the Spaniards since Hanno's time boast themselves to be the first discoverers." Lloyd supposes it to be New Spain or Florida; but Powell is inclined to consider it a part of Mexico.¹ Here is really all that is known in history respecting the voyage of Madoc, which has been the basis of so many theories, supported by the imagined detection of Welsh words and a Celtic race in America.²

The assertion that Columbus may have derived his knowledge of a western continent from the Scandinavians, during his voyage to the north, in 1477, or from a map representing the discoveries of the Zeni, is invalidated by a comparison of dates. The claims of Martin Behem, the German contemporary of Columbus, ingeniously presented by M. Otto in the Transactions of the American Philosophical Society for 1786, are also disposed of by similar scrutiny.³

That the NORTHMEN planted themselves in Greenland, and, about A. D. 1000, coasted the North American shores as far south as 41° 30' N. latitude, seems to be established by documentary proof. A greater extent of discovery is claimed for them by Scandinavian writers upon similar testimony; and wonderful tales are told of what they heard from the natives, of white men, supposed to be from Ireland, who had preceded them, and occupied the country as far south as Florida. Moreover, an Icelandic chief, Are Marson, was said to have been driven by a storm among the same white men as early as A. D. 982; who being detained, was baptized in the Christian faith, and was recognized subsequently by some sailors from the Orkney Islands and Iceland.⁴

Belonging to the same region of mystical adventure, although its heroes were natives of Venice, is the marvellous tale of the Zeni. These brothers, Nicolo and Antonio Zeno, were of a distinguished family in Venice, and, according to the narrative, Nicolo, the elder, having a strong desire to see the world, about A. D. 1380, equipped a vessel at his own expense, and passing the Straits of Gibraltar sailed towards the north. The incidents of the story are that he was wrecked upon an island north of Great Britain, called Friseland; and being rescued from

¹ Hist. of Wales, p. 196. Priece's Edition.

² For a summary of evidence supposed to indicate the emigration of a Welch colony to this country, and a knowledge of the language by certain tribes of Indians at the south and west, see "Enquiry into the truth of the tradition concerning the Discovery of America by Prince Madog," by John Williams LL. D., London, 1791, and Carey's American Museum for April and May, 1792.

³ Irving's Columbus, III. Appendix.

⁴ "Antiquitates Americane," Transactions of the Royal Society of Northern Antiquaries.

the natives by a powerful chief who happened to arrive just then for the purpose of making a conquest of the island, was received into his favor, knighted, and became the commander of his navy. Antonio having been sent for, the brothers engaged in various enterprises together, and founded a monastery and church in Greenland. Nicolo dies, but Antonio remains in the service of the chieftain, Earl Zichmni, fourteen years. At some time during this period he obtained, from a mariner who came to Friseland, the following statement: That twenty-six years before, the mariner was one of a party which was cast upon an island called Estotiland, a thousand miles distant, a populous and civilized country, there being Latin books in the King's library; that being sent by the King to visit a country to the south-called Drogeo, they narrowly escaped being devoured by the inhabitants, who were cannibals; but learned that far to the southwest was a more civilized region and temperate climate, where the people had a knowledge of gold and silver, erected splendid temples to idols, and sacrificed human victims; and that after a long time, having acquired wealth in Estotiland, the mariner fitted out a bark of his own and made his way back to Friseland.

Stimulated by this story Earl Zichmni sent Antonio in search of the countries described. The mariner died before Antonio sailed; but some of his companions from Estotiland were taken as guides. The voyage proved unsuccessful; and there the matter appears to have ended.

These particulars are said to be derived from the letters of the Zeni to their friends in Venice. They were first published in 1558, by a descendant of the family who represented that, when a child, he had mutilated the manuscript, not knowing its value, but afterwards collected the fragments and disposed them in the best possible order. Some able writers and candid judges have considered the account as authentic and credible. It was rather difficult to find a locality for Friseland, which was described as larger than Ireland; but the name was decided to be a corruption of Ferrisland, or Faro Islands. Zichmni was supposed to be a Scottish chieftain named Sinclair, known as the Earl of the Orkneys. In construing the tale of the mariner, Estotiland is determined by Malte Brun, to be Newfoundland, Drogeo the country intermediate between that and Florida; while Mexico is considered as the civilized region spoken of as lying far to the southwest.¹

To this list of sources from whence the ante-Columbian population of America may have been derived, should be added the supposition that the fleet of Kublai Khan, first emperor of the Moguls, which, being sent to conquer Japan, disappeared in a storm, about A. D. 1294, may have been driven to this continent. It has been remarked that the two empires of Mexico and Peru, about that time, sprang up in the midst of savage and rude nations; a circumstance which has been thought to favor the supposition that the founders of those empires came to their respective localities by sea, and may have belonged to the missing ships.²

¹ For a favorable view of the narrative of the Zeni, see an article in the *North American Review*, for July, 1838, written by Hon. George Folsom.

² Foster's *Hist. of Voyages and Discoveries in the North*, p. 43. n.

It remains to mention, with great brevity, the manner in which the various hints from history have been used in accounting for the population of the new world.

Many writers upon this subject, particularly those of ancient date, refer to numerous authors, whose works, however famous in their time, are now seldom perused, and whose names, to most persons, will convey no definite idea of the value of their opinions. Among those who were supposed to be able to throw light upon the subject, out of the abundance of their learning, were celebrated hebraists, biblical critics, and professors of history, the expression of whose views is often quite incidental, and founded upon facts or analogies which happened to strike them while pursuing investigations but indirectly connected with it. Annalists, geographers, and chronologists, who made a special study of cosmogony, are more legitimate authorities; and authors who wrote concerning any portions of this country from personal observation, or as compilers of the narratives of others, are entitled to a due consideration of their impressions in regard to the probable sources of its population.

It would be too wide a departure from the object of this cursory review to attempt a scrutiny of the circumstances under which opinions were formed, or the grounds on which they were based, beyond such allusions as in the course of a rapid summary have been, or may be, casually introduced.

The theory of an indigenous origin of men and animals in America, goes behind all others, of course, whether relating to a part only, or to the whole of the continent. This view has not been uncommon among writers of a certain school. Cornelius de Pauw, one of the philosophic coterie of Frederic the great, argued that life in the New World was not only distinct in its origin but of inferior quality, the men having less vigor of mind and body, and animals less of spirit and strength than their congeners elsewhere.¹

Count Carli, an Italian of distinguished scientific attainments, undertook a refutation of the opinions of de Pauw, and at the same time endeavored to establish his own in favor of the former existence of the island or continent of Atlantis, five or six thousand years before our era; which he supported by a learned analysis of mythological and historical traditions, geological phenomena, and astronomical calculations.²

The hypothesis of submerged land in the Atlantic Ocean is, in fact, that which is most generally resorted to by those who suppose the western continents to have been peopled anterior to the flood of the Scriptures.

Peter Martyr d'Anghiera, whose history of the discovery of the New World was compiled from the manuscripts of Columbus, held that the inhabitants of Yucatan were descended from Ethiopians. Oviedo, under whose administration as Director of the mines of St. Domingo, the natives melted away beneath the severity of their task-work, in his History of the Indies affirms, that the Antilles are the Hesperides of the ancients. Andrew Thevet, a Frenchman of great learning, but accused of

¹ *Recherches Philosophiques sur les Américaines*, &c.

² A French translation of Carli's *American Letters*, with notes and additions by Lefebvre de Villebrune, was published in Boston and Paris simultaneously, in 1788.

credulity, who came to Brazil in 1555, charged with the establishment of a religious colony, believed in the transatlantic migration of the Israelites. Gomara and de Lery, with similar opportunities of observation, as already stated, made the Americans to descend from the Canaanites.

William Postel, an ingenious ethnological writer and oriental scholar, sometimes called a visionary,¹ maintained that all North America was peopled from Mauritania. He is the first who made a distinction between North and South America, supposing them to have nothing in common in their origin. The Peruvians and Chilians, he traced to the Gauls; in which conjecture he is sustained by Jaques Charron author of a history of the Gauls. Paolo Giovio, an Italian historian of great repute, imagined that the Mexicans derived from the Gauls their practice of human sacrifices. Edward Brerewood, an English antiquary of the sixteenth century, deduced the whole population of the New World from the Tartars. Martin Hamkema (Latinized Hamconius), and Suffrid Petri, two historians of Dutch Friseland, agreed in deriving the occupants of Peru and Chili from the Frisians. Acosta and Garcia, Jesuit Missionaries long in Spanish America, thought the country was peopled by degrees, and from various sources. The former, deeming it not improbable that vessels might, from time to time, have been cast upon these shores, inclined to credit the story from Aristotle, of a Carthaginian ship driven far to the westward, which discovered lands till then unknown, that might have been America. He was at a loss to determine how animals were transported. Athanasius Kircher, a German mathematician and antiquary, who wrote several works concerning Egypt, traced the Americans to the Egyptians, and thought the Atlantis extended from the Canaries to the Azores. Arius Montanus, a Spaniard very learned in Jewish antiquities, Francis Vatable, and Gilbert Genebrard, both eminent professors of Hebrew, at Paris, Anthony Possivin, a learned Jesuit of Mantua, and Martin Becan, a German professor of theology and philosophy, concurred in the belief that the Ophir of Solomon was in America.

Among the most prominent of those who, at an early period, wrote expressly upon the question of the origin of the American nations, are the learned Grotius, the Flemish geographer John De Laet, and the Leyden Professor Horn. Grotius supposed that the Isthmus of Panama was an impenetrable barrier between the two divisions of the continent. With the exception of Yucatan and its neighborhood, he makes the whole of North America to have been peopled by the Norwegians, by way of Iceland, Greenland, Estotiland, &c., who were followed, some ages after, by Danes, Swedes, and other German nations. He believes, with Peter Martyr, that some Ethiopians, who were Christians, may have been cast on the shores of Yucatan. He would derive the Indians of South America, near the Straits of Magellan, from the Moluccas and Java. The Peruvians, he doubts not, are a Chinese Colony. The Tartars, or Scythians, he excludes entirely.

Upon the dissertation of Grotius, De Laet published a sharp criticism, and a warm controversy arose between them. Having disposed of most of the theories of Grotius,

¹ "Célèbre visionnaire, et l'un des plus savants hommes de son siècle."—*Biog. Universelle*.

successfully, as Charlevoix thinks, whose convenient summary of their views is here abbreviated, and having also reviewed the positions of other writers, De Laet expresses his own, viz: that the ancient inhabitants of the Canaries, whose deserted edifices were seen, according to Pliny, by the first Europeans who discovered those islands, had passed over to America, and that, with equal probability, passages might have been effected from the Cape Verdes to Brazil. Great Britain, Ireland, and the Orcades, are also admitted as probable sources of emigration, and the story of Madoc is received with favor. He thinks colonies might have come from the Scythians, and that South America was peopled from New Guinea. He concludes with an examination of the opinion of Emanuel de Moraes, that the whole country was peopled by the Carthaginians and Israelites.

Prof. Horn, who had the advantage of coming after most of the authors already referred to, discusses the subject in a Latin treatise of two hundred and eighty-two pages, 12mo, printed in 1652. Having reference to previous opinions, he excludes from the New World, as original colonists, Ethiopians, Norwegians, Danes, Swedes, Celts, Samoides and Laplanders, Greeks and Latins, Hebrews, Christians and Mahometans. He supposes that the country began to be peopled from the north by the Scythians; that the Phœnicians and Carthaginians afterwards got footing by the Atlantic Ocean, and the Chinese by the Pacific; that other nations might from time to time have landed here; and, lastly, that some Jews and Christians may have arrived, but not till the land was already peopled. He considers it probable that the Atlantis of Plato was part of America, and was submerged in the deluge of which traditions remained among the Mexicans.

The relation of Diodorus Siculus, respecting the large island visited by the Phœnicians, he regards as indicating their second emigration to America; their third and last being in the service of Solomon to Ophir, which is Hayti. The later emigrations he would make out to be of three sorts of Scythians, viz: the Huns, the Tartars of Cathay, and the Chinese. The following are some of his fanciful derivations. The Apalaches of Florida from the Apaleans of Solinus; the Tombas of Peru from the Tabians of Ptolemy; the northern Hurons from the Huyrons, neighbors of the Moguls; the Iroquois from the Yreas, or Turks.

These references might be very much extended; but the foregoing are perhaps sufficient to indicate the principal varieties of opinion, and the more prominent among early authors by whom they have been entertained. Other writers appear to have added little to their facts or their arguments, although many changes have been rung upon these in their application.

The sources of derivation that appear to have been regarded as possessing the strongest claims to consideration, are the Hebrews (by whom the lost tribes are most commonly signified); the Phœnicians under various names, as Carthaginians, Tyrians, Canaanites, &c.; the Scythians, and the Scandinavians. Analogies in arts and customs have led to the supposition of Greek, Roman, Etruscan, Chinese, Hindoo, and other colonies in America; but the four sources above mentioned seem to have found the most numerous advocates.

Some of the later supporters of the Hebrew origin of the Indian tribes have already been mentioned. The Phœnician emigrations are presented under a new

aspect in the work of Dr. Cabrera, published in 1822;¹ and the somewhat peculiar production of George Jones, printed in 1843,² not only maintains the advent of the Tyrians, but also the arrival of St. Thomas and the introduction of Christianity, a notion to which certain supposed Christian symbols in Central America gave rise at a very early period.³

In the work of Rivero and Von Tschudi, on Peruvian antiquities, recently translated by Rev. Dr. Hawks, the Scandinavian tale of Whitemen (Irish), established in the Carolinas, and perhaps in Florida, who had *horses*, is admitted as a *certainty*, while credit is also given to various ancient speculations; and the translator states that the hypothesis of a Phœnician origin for that body of settlers who peopled Guatemala, has, within the last two or three years, been invested with fresh interest by the new discoveries of the Abbé de Bourbourg, whose work was said to be in the press at Paris.

With regard to the maritime skill and enterprise of very early periods, it may be remarked that the tendency at present is to ascribe to those periods a wider knowledge of the form and surface of the earth, and of the arts of navigation, than has sometimes been deemed warrantable; and this tendency is the result of enlarged information upon cosmical questions.

Humboldt not only yields a belief to the circumnavigation of Africa at a very remote era, but expresses the opinion, founded upon careful investigations, that the Canary Islands were known to the Phœnicians, Carthaginians, Greeks, and Romans, and, perhaps, even to the Etruscans.⁴ This admission, of course, implies a

¹ Translation of Del Rio's Description of an Ancient City near Palenque; to which is added a Critical Investigation and Research into the History of the Americans, by Dr. Paul Felix Cabrera, Lond. 1822.

² An Original History of Ancient America, founded upon the Ruins of Antiquity, the Identity of the Aborigines with the People of Tyre and Israel, and the Introduction of Christianity by the Apostle St. Thomas, by George Jones, R. S. I: M. F. S. V., &c., London and New York, 1843.

³ Clavigero's Mexico, pp. 13 and 14, Cullen's translation.

Madame Calderon de la Barca inserts the following account of these emblems of Christianity in her "Life in Mexico," 1843:—

"It is strange, yet well authenticated, that the symbol of the cross was well known to the Indians before the arrival of Cortez. In the Island of Cozumel, near Yucatan, there were several, and in Yucatan itself there was a stone cross. And there an Indian, considered a prophet among his countrymen, had declared that a nation, bearing the same as a symbol, should arrive from a distant country! More extraordinary still was a temple, dedicated to the *holy cross* by the Toltec nation, in the city of Cholula. Near Tulansingo, there is also a cross engraved on a rock with various characters, which the Indians, by tradition, ascribe to the Apostle St. Thomas. In Oajaca, also, there existed a cross, which the Indians, from time immemorial, had been accustomed to consider as a divine symbol. By order of the Bishop Cervantes, it was placed in a sumptuous chapel in the cathedral. Information concerning its discovery, together with a small cup cut out of its wood, was sent to Rome by Paul V., who received it on his knees, singing the hymn 'Vexilla Regis,' &c."

⁴ Cosmos, N. Y. ed., II. 135, n.

considerable degree of maritime skill on the part of those nations, and the probability of more extended voyages by chance or design.

It is difficult to say anything on a subject like this without saying either too much or too little. It seemed desirable to present a view of the influences under which the investigation of ancient remains in the United States began, and which have continued to affect its progress; but, unless restrained within the limits of a special and well-defined purpose, the theme would expand beyond the compass of a preliminary chapter, and demand a volume for its proper consideration. Too little is, on the whole, better than too much for the object intended. Few persons have undertaken to treat of American antiquities without being seduced into speculations upon their origin founded upon analogies which appeared to them evidences of connection with some nation or race of the eastern continent; yet nothing is more deceptive than are such superficial resemblances. Proof of this may be seen in the fact that all the learned discussions that have taken place, and all the ingenious theories of this nature that have been suggested, have left the questions in their original perplexity; at least have made no advances towards their solution that are satisfactory to the public mind. In most cases, analogies of customs, of arts, and of terms in language, if they prove anything, prove more than can possibly be admitted, as researches into that field of inquiry abundantly show. If trusted implicitly, there is hardly a people on the globe that may not be supposed to have left traces of occupancy or communication in some section of our continent. Whether an examination of the physical characteristics of the native tribes, and the grammatical structure of their dialects, to which scientific men have turned with the hope of detecting reliable tokens of national lineage, has been productive of more certain conclusions, succeeding inquiries may disclose.¹

¹ Morton, in "*Crania Americana*;" Morton's "*Inquiry into the Distinctive Characteristics of the Aboriginal Race of America*;" "*The Physical Type of the American Indians*," in Schoolcraft's large work; the "*Mithridates*" of Adelung, Vater, &c.; Vater's "*Untersuchungen über America's Bevölkerung*;" Duponceau and Heckewelder, in "*Trans. of the Historical and Literary Committee of the Am. Phil. Society*;" Duponceau, in "*Mémoire sur les Langues de L'Amérique du Nord*;" Gallatin, in "*Trans. of the Am. Antiquarian Society*," and "*Trans. of the Am. Ethnological Society*;" "*Types of Mankind*," by Messrs. Nott and Gliddon; &c. &c.

CHAPTER II.

PROGRESS OF INVESTIGATION IN THE UNITED STATES.

IN passing from general opinions and speculations to such as relate to that portion of the continent which alone is now the subject of consideration, the attention is first directed to a class of authorities from which we might reasonably expect to derive much valuable information. To this class belong the narratives of those early adventurers who saw its inhabitants in their natural condition, occupying their original seats, and in the exercise of their hereditary customs and habits. The Atlantic shores of the United States do not, indeed, present such remains of ancient art as would be likely to attract the observation of those who first visited them; but, in the records of the Spanish expeditions to Florida and Louisiana, we should look for some descriptive recognition of the extensive earthworks that are found in those regions. More especially should we anticipate that the French priests, Franciscans, and Jesuits, who, very early in the 17th century, penetrated to the upper lakes, and thence worked their way through the Valley of the Mississippi to the Gulf of Mexico, would have seen the mounds and inclosures there so frequent, and have been impressed by their numbers and magnitude.

The followers of Narvaes and Soto passed through the sections of country that contain the largest and most imposing of the southern earthworks. The French emigrants that succeeded to the Spaniards, accompanied by missionaries who rendered to ecclesiastical authorities at home periodical accounts of their operations, were in the midst of those structures. At the north, the same class of learned and devoted men were historians of the progress of discovery. In the narratives of the Franciscan Friars, and in the reports of the Jesuits to their Superiors, we have elaborate notices of the natural history of the country, the manners, customs, and dialects of the natives, and their faculties and dispositions.¹ At a later period,

¹ These Reports, commonly termed *Relations*, "*Relations de ce qui c'est passé, &c.*," are not only very valuable, as sources of important and peculiar information, but they are, unfortunately, very rare. They are printed in small volumes, 12mo or 8vo, in number about forty, extending, with some intervals, from 1611 to 1671, and perhaps later. It is said that a complete series is not to be found even in the Royal Library at Paris. Dr. O'Callaghan prepared an account of them, which was printed with the Proceedings of the New York Historical Society for November, 1847, and contains a table showing what volumes are in this country, and where they may be found. This account was printed in French in 1850, with notes, corrections, and additions, by the Superior of St. Mary's College, Montreal. Mr. James Lenox, of New York, has recently caused to be reprinted fac-simile copies of the letters of Father Le Mercier, written in 1655, and those of Jerome Lallemant, written in 1659, and has added to them the Relation for the years 1676 and 1677, which had not before been published.

similar returns, published under the title of "Lettres edifiantes et curieuses," contain much of the same kind of information. But, from all the explorations of these educated men, apparently observing as well as learned, very little is to be derived illustrative of the antiquities of the country, or even referring to their existence. It is remarkable how completely monuments, now viewed with surprise, were unobserved or disregarded by French and Spanish adventurers and travellers. Not only the pictorial mounds of Wisconsin, whose slight elevation and large dimensions might in uncleared lands conceal their forms, but the massive and regular parapets and lofty tumuli of the middle and southern portions of the west, seem to have been unheeded, at least as antiquities, or not esteemed worthy of special examination.

La Hontan, in one of his letters, dated May 16, 1689, gives a drawing and description of a medal that he professes to have found among the savages west of the Mississippi, and which he calls a modern antique (*antique moderne*). It is represented as of copper, with figures of animals on one side, and characters on the other. But the whole story of his expedition in that quarter is held to be apocryphal.

It may be that minds preoccupied with the grandeur of Mexican structures would be likely to consider the inferior elevation and extent of earthworks north of the gulf as rendering these undeserving of notice; and, in Florida and Louisiana, they may have been so far used, and even formed, by existing tribes, as to create no impression of an ancient or other than contemporaneous origin.

In the letters of Charlevoix and Father le Petit, and in the "History of Louisiana," by Du Pratz, we have very minute accounts of the Natchez Indians, who, with the Arkansas, were the most civilized of the North American aborigines. We learn that they worshipped the sun, had temples in which was kept the "eternal fire," and a despotic government; that their chiefs were the high priests, and were called suns, or children of the sun; and that the temples and the dwellings of the chiefs were raised upon mounds, and for every new chief a new mound and dwelling were constructed.¹ Thus, a civil and religious system, with customs and ceremonials pertaining to it, is described, which explains the use of some of the artificial elevations, and may indicate the purpose of others. But parapets and tumuli, and other structures of earth, are found in that region, which seem to imply the existence of more cultivated or more populous nations, and a larger scale of ceremonial observances, than these writers have represented. A mere diminution of numbers, and consequently of power, without any material difference of customs or capacities, may perhaps be sufficient to explain the diminution of grandeur in the ceremonies and structures of the later inhabitants. The decay of energy and enterprise, rather than of arts—the result, probably, of a decrease of population—which, in other parts of the country, led to a discontinuance of the construction of works consecrated to religious rites, or intended for permanent defence—may have been less advanced in its influence at the south. Hence the contrast between the monuments of the past and the productions of the living inhabitants would be less striking. Still, the absence of archæological discoveries and speculations, on the part of the intelligent

¹ See also Garcilazo de la Vega's Account of Soto's Expedition, I, 218.

and well-informed men who first visited the interior parts of the present United States, is somewhat singular, in view of the fact that so much has since been brought to light in the very paths on which they trod.¹

We therefore advance to the period when investigations may be said to have commenced; and it is proposed to refer, in chronological order, to the observations and opinions of which the antiquities of the United States have been the subject, since they were noticed as such, and regarded as objects, not of curiosity merely, but of mystery and wonder.

It is not to be expected that every allusion which may have been made by travellers or others to the existence of such remains will be included in these references; but it is hoped to embrace those which are of most importance, and which represent the nature and degree of knowledge possessed at the time.

In the years 1748, 1749, and 1750, Peter Kalm, Professor of Economy in the University of Abo, in Swedish Finland, made a tour of scientific observation in this country, and was careful to record everything that seemed to him worthy of attention.² After speaking of the entire absence of ruins or evidences of ancient habitations that give interest to travels in other countries, he says: "There have, however, been found a few marks of antiquity, from which it may be inferred that North America was formerly inhabited by a nation more versed in science and more civilized than that which the Europeans found here on their arrival; or that a great military expedition was undertaken to this continent from those known parts of the world." He then states that, some years before he came into Canada, the Governor-General sent M. de Verandrier, with a number of people, across North America to the South sea. From Montreal they went as due west as the lakes, rivers, and mountains would permit. In a far country, beyond many nations, they met with large tracts free from wood, many of which were everywhere covered with furrows, as if they had formerly been ploughed and sown. "When," says Kalm, "they came far to the west, where, to the best of their knowledge, no Frenchman or European had ever been, they found in one place in the woods, and again on a large plain, great pillars of stone leaning upon each other. The pillars consisted of one single stone each, and the Frenchmen could not suppose that they had been erected by human hands. * * * * * At last they met with a large stone, or pillar, in which a smaller stone was fixed that was covered on both sides with unknown characters. This stone, which was about a French foot in length, and

¹ Brackenridge, in his "Views of Louisiana," remarks, in relation to the remains of supposed fortifications there: "The French writers, who most probably observed them, do not speak of them; a proof that they had no doubt as to their origin, nor thought of attributing them to any other than the natives of the country." p. 183.

² The expenses of Professor Kalm's scientific tour were defrayed in part by contributions from the universities of Sweden, and in part by the king. One of the points to which his curiosity was directed he states to be, "whether any other nation possessed America before the present Indian inhabitants came into it; or whether any other nations visited this part of the globe before Columbus discovered it." The question of discoveries and settlements in the United States by the *Northmen* had not then been agitated.

between four and five inches broad, they carried to Canada, from whence it was sent to France, to the Secretary of State, Count de Maurepas. Several Jesuits, who have seen and handled this stone, unanimously affirm that the letters on it are the same with those which, in the books containing accounts of Tartaria, are called Tartarian characters." The places where the pillars were found were estimated to be near nine hundred French miles westward of Montreal. We believe that such monolithic pillars as are here described have not attracted the attention of later explorers; but the "garden-beds" (as they are now called) exist in Michigan and Wisconsin, and are regarded with wonder at the present day, as differing altogether in form and arrangement from the usual remains of Indian agriculture. The mention of them imparts an air of authenticity to Verandrier's narrative.

Prof. Kalm draws his own inference from the account, and believes that the pillars and the Tartarian inscription indicate the presence of the followers of Kublai Khan.¹

In another part of his work he mentions having been informed, by an aged Swede in New Jersey, that when the Swedes settled on the Delaware, near where Salem is now situated, they found, at the depth of twenty feet, some wells inclosed with walls of brick. Since that period the river had so far encroached upon the land, by washing away its banks, that the wells were then covered with water, which was seldom low enough to admit of their being seen. From these and other evidences of the use of bricks discovered in that neighborhood, he infers the existence of an ante-Columbian settlement at that place.

In November, 1766, Jonathan Carver was at Lake Pepin on the Mississippi; and in the journal of his travels mentions the embankments he saw in that neighborhood, which appeared to him of a military character, and sufficient to cover five thousand men. This is usually considered the earliest mention of western earth-works as indicating a higher degree of art than existing races of aborigines were supposed to possess. James Adair, whose *History of the American Indians* was published in 1775, began his acquaintance with Indian life as early as 1735, and most of his book was written among the Chickasaws, with whom he first treated in 1744. He says that, from the most exact observations he could make, in the long time that he traded among the Indians, he was forced to believe them lineally descended from the Israelites; and the main object of his book seems to be to demonstrate that proposition. His references to vestiges of antiquity are few and rather indefinite. He speaks of traces of the ancient warlike disposition of the people as being found, "through the whole continent and in the remotest woods," that, "great mounds of earth, either of a circular or oblong form, having a strong breastwork at a distance around them, are frequently met with," but does not give the details of configuration or measurement.

The celebrated botanists, John and William Bartram, father and son, may be regarded as the first by whom a careful and intelligent observation of these structures has been recorded. They were in Florida together in 1765; and in

¹ "Travels into North America," III, 123, et seq.

January, 1766, discovered the remarkable works at Mt. Royal near Lake George. Eight years later William visited the same scene, and found it much changed by the whites who had begun to occupy and cultivate the land. He describes Mt. Royal as a magnificent Indian mound, from which a noble Indian highway fifty yards wide, sunk a little below the common level, and with a slight embankment on each side, led in a straight line three-quarters of a mile to an artificial lake.

William Bartram commenced his journey in the spring of 1773, and passed through the Carolinas, Georgia, East and West Florida, and as far west as the Mississippi river. He gives an account of "many very magnificent monuments of the power and industry of the ancient inhabitants" visible near Wrightsborough, Columbia Co. Georgia, "the work of a powerful nation whose period of grandeur perhaps long preceded the discovery of this continent."

A fortification on the Altamaha, opposite the town of Darien, he mentions as supposed to be of Spanish origin; and he takes note of mounds, terraces, embankments, &c., at the junction of the Ocmulgee and the Oconee rivers; at Charlottia on the river St. Johns; at the junction of the Broad and Savannah rivers in Georgia; at fort Prince George, Pickens Co., South Carolina; and at Taensa and Apalachicola. At the close of his narrative he remarks: "To conclude this subject concerning the monuments of the Americans, I deem it necessary to observe as my opinion, that none of them that I have seen discover the least signs of the arts, sciences, or architecture of the Europeans, or other inhabitants of the old world; yet they evidently betray every sign and mark of the most distant antiquity."¹

It is singular that Captain Bernard Romans, who in 1771-2 travelled through the same regions, and, in 1776, published "A Concise Natural History of East and West Florida," should have paid no attention to the remains of ancient labor that he must have seen. He mentions, in one instance, a large *tumulus* as the only remarkable thing in a certain place, but it did not seem to excite his curiosity. His decided views respecting the aborigines may have influenced his mind in this regard; as he expresses his belief that "from one end of America to the other, the red people are the same nation, and draw their origin from a different source than either Europeans, Chinese, negroes, Moors, or any other different species of the human genus." Again he says: "I am firmly of opinion that God created an original man and woman in this part of the globe, of a different species from any in the other parts," p. 38. He speaks of having noticed some stones deeply marked with lines straight and crossed, which "do not ill resemble inscriptions;" but conjectures that they are made by the savages in grinding their awls, p. 327.

In 1772-3, the Rev. David Jones, of Freehold, N. J., spent some time among the Indians west of the Ohio, and in his journal notices the "Old Fortifications" near Chilicothe and on the Scioto.

¹ In a MS. work on the Creek Indians, left by Bartram, that came into the possession of Dr. Morton, he describes "public squares," alluded to by Adair, which were used by the Indians for religious ceremonies and deliberative councils, and states that ancient inclosures and other remains, concerning the origin of which they professed no knowledge, were also sometimes appropriated to such purposes.—Smithsonian Contributions, II, page 135 of Mr. Squier's Memoir.

A plan and description of the earthworks at Circleville, Ohio, were communicated anonymously to the *Royal American Magazine*, printed in Boston, and were inserted in the number for January, 1775. The plan was taken on horseback, by computation only, Oct. 17, 1772.

During the struggle of our revolution, the minds of all classes of people were absorbed in the exciting political and military events of the time, and little inclination or opportunity existed for archæological investigations. Near the conclusion of the war, Mr. Jefferson gratified his taste for such pursuits, by preparing his "Notes on Virginia," which were written in 1781-2, though not fully published till 1787.¹ His opinions there expressed in regard to the great antiquity of the American races are well known. He was uncertain whether to believe that the Americans were derived from the northern Asiatics, or the Asiatics from the Americans, but saw positive indications of a common origin. Our community was less prepared than now for the reception of views opposed to the usual interpretation of scripture history, and when Mr. Jefferson was a candidate for the presidency, his supposed sceptical sentiments upon this question were strongly urged against him. Of the great earthworks at the west and south he appears to have known little or nothing. He says: "I know of no such thing as an Indian monument." "Of labor on a large scale I think there is no remain so respectable as would be a common ditch for the draining of land." He refers to the barrows found all over the country as possible exceptions, but had in his mind only the small burial mounds of modern date, such as he had seen in Virginia. William Bartram's work had not then been published. Mr. Jefferson's speculations manifest the philosophical acuteness of his mind; and his remarks on a study of the aboriginal languages, as affording the best evidences of derivation, and as most likely to lead to a true solution of the question, indicate the ability and relish with which he would have examined the subject, if the duties of a statesman had left him leisure to devote to it.

No sooner were our citizens relieved from the cares and restrictions of war, than they began to explore and occupy the western country. From Fort Pitt, as a centre of operations, military and surveying parties were sent in different directions to prepare the way for emigration, and to secure the protection of the frontiers. Pioneer settlements had already been made in Kentucky; of which an account was printed by John Filson in 1784, containing a brief notice of two "ancient fortifications," with ditches and bastions, near Lexington.

The design of making an organized settlement northwest of the Ohio, appears to have been first publicly suggested by the soldiers of the revolution in June 1783. A grant had been solicited from the British government as early as 1772, on behalf of the provincial officers and soldiers who had served in the war against France; and on receiving a favorable reply, Israel Putnam and Rufus Putnam, the first afterwards the celebrated general of the revolution, the other, also, subsequently, a

Jefferson distributed to his friends in Paris, copies of his "Notes," bearing the date of 1782, but supposed to be printed in 1784. A more complete edition was printed in 1787.—*Rich. Bibliotheca Americana.*

general officer, but better known as the pioneer of settlements in Ohio, went with one or two more to the southwest, and spent some months in exploring and locating townships on the Big Black river near its junction with the Mississippi, about latitude 33° north. Several hundred families are said to have left Massachusetts and Connecticut to make the settlement; but the grant was revoked by the king, many of the emigrants sickened and died, and war breaking out soon after, the enterprise was abandoned.¹ It would be a matter of curious speculation to determine what might have been the results if a New England colony had then been planted so far to the southwest. We may at least suppose that one of the Putnams would have been lost to the army of the revolution, and the other have given priority in prominence to the antiquities of the Yazoo country, instead of to those of the Muskingum.

It was not till April 7, 1788, that the company organized by General Rufus Putnam, after the Revolution, arrived at the mouth of the Muskingum to take possession of lands they had purchased of the United States Government. That day is commemorated by the Historical Society of Ohio, as introducing the first organized white settlement in the region northwest of the Ohio river.

The remarkable earthworks of Marietta are doubtless the first that were carefully surveyed, and of which drawings were presented to the consideration of scientific men. Dr. Mannasseh Cutler, and General Rufus Putnam, are usually cited as original observers of the remains among which the new village was located. The precedence of discovery and description is, however, due to other persons, as a comparison of dates will show.² During the years 1785 and 1786, letters from officers in the army to their friends at home, containing allusions to Indian antiquities, were published in the newspapers of the day. The accounts were often highly exaggerated, and gave rise to burlesque descriptions of wonderful adventures and discoveries that affected the credit of well-founded narratives. General Samuel H. Parsons, an officer of standing and character, from Connecticut, gave to these observations an authentic character, in a communication addressed to President Willard, of Harvard College. In his letter, dated Oct. 2, 1786, the mound at Grave creek is described, and the works at Marietta are referred to, and mention is made of a plan of the latter, which the writer had previously sent to President Stiles, of New Haven. This communication was afterwards published in the *Memoirs of the American Academy of Arts and Sciences*, Vol. II, 1793, but without the plan. There is good reason to believe that the plan forwarded by General Parsons to President Stiles is the same that may be found in the *Columbian Magazine* of May, 1787. This was drawn by Captain, afterwards Major Heart, and is accompanied by an elaborate description. In the winter of 1786, President Stiles had written to Dr. Franklin, requesting his opinion of the fortifications at Muskingum, &c., described by General Parsons and others. It may

¹ MS. Autobiography of Gen. Rufus Putnam.

² Dr. Cutler, who with Winthrop Sargent had negotiated the purchase of the land for the Ohio company, did not arrive at Marietta till August, 1788.—*Historical Disc. of Rev. Thomas Wickes*, at Marietta, Dec. 6, 1846.

be presumed that the drawing was sent at the same time, as it would be required, of course, to enable Franklin to form a judgment of the nature and object of the structures. Franklin might naturally transfer it to the editors of the magazine in Philadelphia for publication, as a matter of general interest and curiosity. It does not appear as a communication *from* Captain Heart, and is inserted without note or comment. General Parsons, who was but two days at Marietta,¹ on his way down the river, speaks of having left at that place, a request with an officer of learning and great curiosity in his observations of the natural world, to inform him of his discoveries, from whom it would appear that much of his information had been derived. Captain Heart was stationed at Fort Harmar, on the opposite bank of the Muskingum, and subsequent papers written by him manifest the qualities attributed to the officer alluded to.

We may justly conclude that the plan in the *Columbian Magazine*, is the one referred to by General Parsons, and that, next to the sketch of the works at Circleville in 1772, before mentioned, it is the earliest diagram made of western antiquities. Captain Heart was not only one of the earliest observers in this field of investigation, but manifested a zeal, intelligence, and comprehensiveness of research, that promised the most satisfactory results. A few years later (Jan. 1791), in reply to inquiries of Dr. Benjamin Smith Barton, he wrote a paper, embodying much valuable information, that was read before the American Philosophical Society, and is included in the third volume of the transactions of that body. In this communication, he refers to a large number and variety of earthworks observed by himself and others in the western country, at the mouth of the Muskingum, at Grave creek, at Paint creek, and along the Scioto, on the Kentucky side of the Ohio opposite the mouth of the Scioto (the last said to have been accurately traced by Col. George Morgan), and on the Great and Little Miami. He mentions that others have been described to him as situated on the Big Black river (the intended site of the colony from New England before the Revolution), at Bio Pierre on the Mississippi, and on the head waters of the Yazoo and Mobile rivers. This was an extensive range for that period, and includes remains whose discovery has been ascribed to later explorers. Contrary to the general tendency of the time, the writer indulges in no visionary speculations, but simply gives his opinion that the earthworks were not constructed by De Soto, because he did not visit the regions where they are principally found, and had no time for such labors anywhere; that the state of the works and the trees growing on them indicated an origin prior to the discovery of America by Columbus; that they were not due to the present Indians or their predecessors, or some tradition would have remained of their uses; that they were not constructed by a people who procured the necessaries of life by hunting, as a sufficient number to carry on such labors could not have subsisted in that way; and, lastly, that the people who constructed them were not altogether in an uncivilized state, as they must have been under the subordination of law, with a strict and well-governed police, or they could

¹ Then called "Muskingum," from the river at whose mouth it is situated.

not have been kept together in such numerous bodies, and been made to contribute to the execution of such stupendous works.

It is evident that, with the aid of persons so competent and so well disposed to pursue such investigations as Captain Heart and General Parsons, a rational development of the nature, extent, and probable origin of our aboriginal antiquities, need not have been postponed for thirty years, which actually elapsed from this period before any detailed and connected view of them was given to the public. Unhappily both met with a premature and violent end. General Parsons was drowned in the Ohio, in December, 1789; and Heart, then a major, was slain at the disastrous defeat of St. Clair, in November, 1791, when the flower of the western army were involved in the same destruction.

In reply to the inquiry of President Stiles, Franklin would undertake to give no explanation of the works described, but suggested that they might possibly have been constructed by Ferdinand De Soto as a defence against the savages. Upon this hint, Noah Webster addressed a series of letters to Dr. Stiles, in which he attempted to trace the route of the Spanish adventurer, and to show that the embankments at Marietta might have been erected by his followers. These were written in 1787, and first published in the "American Magazine," of which Mr. Webster was editor, and reprinted two years later in the "American Museum."

Col. Winthrop Sargent, who afterwards occupied high official positions at the West, was among the earliest to collect information on matters of antiquarian and scientific interest there. In March, 1787, he wrote to Governor Bowdoin, President of the American Academy of Arts and Sciences, inclosing a plan and description of the remains at Marietta, discovered (he says) by the garrison at Fort Harmar the year previous. For some reason this communication was not published at the time; but, having been brought to the notice of the Academy by Dr. Bowditch, the librarian, so recently as 1850, was first printed in 1853.¹ The sketch is a more

¹ *Memoirs of Am. Acad.*, Vol. V, Part I. Dr. Bowditch remarks that the plan bears a date four years earlier than any documents mentioned by Messrs. Squier and Davis. He also refers to the plan alluded to in the letter of Gen. Parsons to President Willard, of which he says he has no knowledge; and, supposing the latter to be lost, would be right in considering that of Col. Sargent as the earliest now extant. In Part IV. of Mr. Schoolcraft's history of the condition and prospects of the Indian tribes, under the head of "Epoch of the Discovery of the Western Tumuli," it is said, "Accounts of these antiquities at Marietta were first published by Dr. Manasseh Cutler and the Rev. Thaddeus M. Harris, with diagrams of the antique works drawn by Gen. Rufus Putnam, made immediately after the settlement of the town." This statement is evidently taken from Mr. Atwater's treatise in the first volume of the *Transactions of the American Antiquarian Society*. The facts are, that Dr. Cutler's very brief account is in a note to his charge at the ordination of Rev. Joseph Story, at Marietta, August 15, 1798, which was printed the same year; while Dr. Harris's "Tour" was not published till 1805. The error has so often been repeated that a specific correction is desirable.

In this connection it may be well to refer to another misapprehension in the same volume of the work of Mr. Schoolcraft, viz: that "assertions of a Celtic element in the Indian languages first originated in America in 1782, in certain accounts given by Isaac Stuart, of South Carolina, an early Western trader." The letter of Morgan Jones, "Chaplain to the Plantations of South Carolina," dated New York, March 10, 1685-6, and published in March, 1740, in the "Gentleman's Magazine," London, X, 104, is probably the most remarkable "assertion" that has appeared. The letter affirms that, being taken prisoner by the Tuscaroras in 1660, the writer found himself able to converse with them in the British (Welsh) language, and actually preached to them several months in the same tongue.

elaborate one, and more highly finished than that of Captain Heart, from which it differs in a few slight particulars, being evidently drawn from a subsequent survey.

A few years later, Col. Sargent forwarded to Rev. Dr. Belknap, the historian, and also to the American Philosophical Society, a paper, with drawings of ornaments and implements taken from the mounds at Cincinnati; which formed the text of an elaborate treatise on the subject of western antiquities, read before the Philosophical Society by Dr. Benjamin Smith Barton.¹

In 1787, Dr. Barton, then a student of medicine at Edinburgh, commenced the publication of a work entitled "Observations on Some Parts of Natural History." The first part, which alone was printed, relates to antiquities, and contains an account of the discoveries at Muskingum, and remarks on the first peopling of the country. This was noticed the same year in the London "Critical Review," where the writer, differing from what he supposes to be the opinion of the author, viz: that America derived its inhabitants from the north of Europe, is disposed to regard the *south* of Europe as the source of their origin. Dr. Barton intended merely to assume, as an hypothesis, that the Danes were the ancestors of the race that built the mounds and fortifications, while the country at large had probably been peopled from a thousand sources.²

In 1788, Rev. Samuel Kirkland, missionary to the Senecas, of New York, observed the remains of embankments and inclosures in Monroe and Genesee Counties, in that State.

Notices of earthworks are not infrequent, about this period, in the journals of travellers, and persons connected with the army at the West. The third volume of the Collections of the Massachusetts Historical Society contains an extract from the MS. journal of a gentleman connected with the forces under the command of Gen. St. Clair, in which the vestiges of ancient "fortifications" are spoken of as "ever presenting themselves to the view." The writer says he has been told that they owe their origin to the Welsh; referring evidently to the statement of Isaac Stuart, of what he professed to have learned from certain Indians respecting their origin from a foreign country, supposed, from their knowledge of the Welsh language, to be Wales; which statement was printed in some of the newspapers, in October, 1785.³

¹ See "Massachusetts Magazine," July, 1795, and "Transactions of Am. Phil. Society," IV, 1799. Dr. Barton's paper was in the form of a letter to Rev. Joseph Priestley.

² Letter to Dr. Priestley, Trans. of Am. Phil. Society, IV.

³ The circumstances that may be adduced to prove the former existence of a Celtic colony in the southern regions of the United States are certainly curious, and exhibit some remarkable coincidences.

The Scandinavian tales of an "Irish Christian people," somewhere south of the Chesapeake, relate to a period nearly two centuries prior to the alleged expedition of Madoc, but deserve to be noticed in this connection. The same localities, near the Gulf of Mexico, have been assigned to them that are designated as the original abode of the followers of the Welsh chieftain. Then we have the story of the Rev. Morgan Jones, that the Tuscaroras understood his preaching "in the British tongue," about A. D. 1660; and the less definite accounts of "one Stedman," and "one Oliver Humphreys," respecting natives, somewhere near Florida, who spoke Welsh. To these are to be added the statement of Mr. Charles Beatty, a missionary, who visited the interior in the year 1766. Benjamin Sutton, a captive, informed him that he had been with the Choctaws to an Indian town, a very considerable

In the American Museum for May, 1792, and also in the Massachusetts Magazine for August, 1792, is an article that purports to be "an extract from the MS. of a late traveller," which is of interest as showing how far west and north the antiquities of the interior had already been observed. The writer refers to the "ruins," in the Illinois and Wabash countries, and adds, that there are others no less remarkable many hundred miles further west, and particularly about the great falls of the Mississippi. He speaks of pyramids from thirty to seventy or eighty feet high, some of which were examined, and a stratum of white substance like lime generally found in them; and of circular fortifications inclosed with deep ditches and fenced with a breastwork.

The attention of literary and scientific men in the eastern States was now fairly roused, by the well authenticated descriptions of remarkable antiquities which had been transmitted from the West. The presidents of the colleges at New Haven and Cambridge, and the members of learned societies in Boston and Philadelphia, were called upon to express an opinion respecting their purpose and origin.

The celebrated discourse delivered by President Stiles, before the general Assembly of Connecticut, in 1783, upon the past, the present, and the future of the United States, gave him distinguished prominence as a curious student of American history, as well archæological as civil and political. In that discourse he assumed as "certain conclusions," 1st, that all the American Indians are one kind of people; 2d, that they are the same as the people of the northeast of Asia. With regard to their origin, he considered them as "Canaanites of the expulsion of Joshua," some

distance from New Orleans, whose inhabitants were of different complexions, not so tawny as the other Indians, and who spoke Welsh, and that they had a book among them wrapped in skins, but could not read it; that he heard some of these afterwards in the lower Shawanough town speak Welsh with one Lewis, a Welshman, a captive; and that this Welsh tribe now live on the west side of the Mississippi, a great way above New Orleans. Levi Hicks, another captive, told Beatty that he had been in a town of Indians, on the west side of the Mississippi, who talked Welsh, as he was told, for he did not understand them. The account given by Captain Isaac Stuart, said to be taken from his own mouth in 1782, and inserted in the Public Advertiser, Oct. 8, 1785, is in substance as follows: That eighteen years before, he was taken prisoner about fifty miles west of Fort Pitt, and carried by the Indians to the Wabash. After two years of bondage, he, and a fellow captive named John Davy (or David), were redeemed by a Spaniard, and accompanying him they crossed the Mississippi, near Red river, up which they travelled seven hundred miles, when they came to a nation of Indians remarkably white, and whose hair was mostly of a reddish color. The day after their arrival, the Welshman (David) declared his intention of remaining with that people, as he understood their language. Stuart's curiosity being excited by that information, he questioned the chiefs with the aid of his companion, and learned from them that their forefathers came from a foreign country and landed on the east side of the Mississippi, the chiefs describing particularly the country of Florida; and that, on the Spaniards taking possession of Mexico, they fled to their then abode. As a proof of their story they exhibited rolls of parchment carefully tied up in otter's skins, on which were large characters written with blue ink, which the Welshman, being ignorant of letters, was unable to read.

If these statements are compared with Mr. Catlin's account of the Mandans, they will be found to correspond remarkably with his convictions respecting the physical differences between them and other tribes, their probable descent from the followers of Madoc, and the course of their migrations. He would doubtless have employed them to strengthen his argument had he been aware of their existence. *Antiquitates Americanæ*, p. XXXVII. Williams's "Inquiry," &c., Am. Museum for April and May 1792. Catlin's *North American Indians*, 6th Lond. Ed. I, 206, II, Appendix A.

of whom, in Phœnician ships, coasted the Mediterranean to its mouth; as appears from the inscription they left there in the ancient Phœnician letter, viz: "*We are they who fled from the face of Joshua the robber, the son of Nun.*" From thence he supposes they crossed the Atlantic, driven by the trade-winds, and commenced the settlement of Mexico and Peru. Another branch of the same people, he inferred, might travel northeastward, become the Tartars of that part of Asia, and finally, passing over to America, constitute the sachemdoms of the northern regions of this continent.¹

This appears to be an independent opinion of President Stiles, as he does not refer to those early writers (Gomara, De Lery, Lescarbot, &c.) who derived the population of certain portions of this country from the Canaanites, though upon different grounds; but he strengthens his view with the judgment of M. Gebelin, of the Paris Academy of Sciences, who had pronounced the characters on the Dighton rock to be Punic (as M. Jomard has since decided those on the Grave creek stone to be Lybian), and interpreted them as denoting that the ancient Carthaginians once visited these distant regions.

Aboriginal monuments are rare in New England; but her scholars did not fail to observe and investigate such as were found. A copy of the inscription on the Dighton rock was made by Rev. Mr. Danforth, as early as 1680. In 1712, Cotton Mather sent a very rude and incorrect drawing of the same to the Royal Society. The Professor of Hebrew in Harvard College, Stephen Sewall, made, in 1768, the first copy that bears any near resemblance to those of recent date; and another was taken, with special care, by Professor James Winthrop, in 1788. The last two delineations are those which reminded Washington of what he had seen in his youth, while carrying the surveyor's chain through western forests.²

President Stiles was active in the examination of American inscriptions. He visited an inscribed rock at a place in Connecticut called by the Indians Scaticook, took full sized drawings of some of the characters, and wrote an account of it in 1789. He also collected accounts of sculptures that had been noticed in other parts of the country, viz: on the south shore of Lake Erie, observed by the missionary Kirkland; on the Alleghany river, below Venango, visited in 1789 by Mr. Frothingham; and others in Brattleboro' Vt., on the Alatomaha in Georgia, and on Cumberland river in Kentucky. In 1790, he prepared an account of a stone bust, supposed to have been an Indian god, which had been found the year before,

¹ The story of the inscription is derived from Procopius, the Greek historian, a native of Palestine, who says that he saw and read it at Tangier, on two marble pillars, in the *ancient* Phœnician character.

² An account of the Dighton rock, and the various conjectures and speculations to which it has given rise, would fill a volume by itself. Since 1680, copies have continued to be taken by different methods, each aiming to be more accurate than others. These are often widely diverse from one another, and no two of them are precisely alike. The construction given to the inscription by the Scandinavian antiquaries is well known. It is not as well known, perhaps, that the now commonly received opinion, that it is the work of the native Indians, was expressed by Gen. Washington, at Cambridge, in 1789. He remarked to Dr. Lathrop, who visited the college with him, that he had repeatedly noticed similar inscriptions in the Indian country, in early life, which were unquestionably executed by the natives.—*Memoirs of Am. Acad. of Arts and Sciences*, III, 205.

at East Hartford, Conn., and deposited in the museum of Yale College. Other remains of aboriginal art and labor, little conspicuous as they were, also attracted attention.

Rev. Gideon Hawley, who about A. D. 1754, was among the Indians of western Massachusetts and eastern New York, as a missionary, on one occasion saw his Indian guide near Scholharie, looking for a stone, which, when found, he carefully added to an ancient pile. Being pressed for a reason the Indian was reluctant to speak on the subject, but stated that his father had done so before and enjoined the same duty on him. Mr. Hawley remarks that he observed such heaps of stones in every part of the country; the largest being on the mountain between Stockbridge and Great Barrington, in Massachusetts. He says, moreover, "we have a sacrifice rock, as it is termed, between Plymouth and Sandwich, to which stones and sticks are cast by Indians who pass it. This custom, or rite, is an acknowledgment of an invisible God whom this people worship. This heap is his altar. The stone that is collected is the oblation of the traveller."¹

A similar heap, or mound of stones, was described by Noah Webster, in 1789, as situated about seven miles from Hartford, on the road to Farmington, Conn., where, according to the tradition of the inhabitants, an Indian was buried, and every one of his race on passing by was accustomed to add a stone to the pile.²

In 1795, Rev. Jacob Bailey communicated to Jeremy Belknap, the historian, then Corresponding Secretary of the Massachusetts Historical Society, an article entitled, "Observations and conjectures on the antiquities of America." In this, as proving the existence of works which exceed the contrivance and ability of the existing generation of Indians, he describes a mound upon an extensive plain, near the mouth of the Kennebec river, in Maine, which he states to be six hundred feet in circumference, and perhaps fifty feet high, and composed of stones intermingled with earth and sand—the summit being a flat surface, nearly twenty feet in diameter, and exhibiting a kind of pavement of large smooth stones. Thus it had appeared twenty-five years before; and its artificial character was supposed to be indicated by the fact that the surrounding lands, for some distance, were entirely destitute of stones—excepting on the beaches of the river, where they resembled those forming the mound.³

Rev. Jonathan Edwards, of New Haven, afterwards President of Union College, at Schenectady, a son of the celebrated metaphysician, communicated to the Connecticut Society of Arts and Sciences, in 1788, his important "Observations on the language of the Muhhekaneew (Mohegan) Indians." This treatise was reprinted in 1823, in the collections of the Massachusetts Historical Society, with great additions by Mr. Pickering, and may fairly be considered as the foundation of the significant philological discovery of a radical connection among Indian languages, notwithstanding a wide local separation, and great diversities of dialect. The author had remarkable qualifications for detecting and developing the most delicate grammatical peculiarities; having begun to learn the language of the Mohegans at six

¹ Mass. Hist. Coll., 1st se. IV. 59.

² Am. Museum, VI. 234.

³ Mass. Hist. Coll., 1st se. IV. 104.

years of age, and having lived with them till it became "more familiar than his mother tongue."

Dr. Barton's "New Views of the Origin of the Tribes and Nations of America," printed at Philadelphia in 1797, and much enlarged the following year, is wholly devoted to the subject of language, and the comparison of vocabularies. A reference to philological studies, so intimately associated with inquiries into the origin and affinities of population, is deferred to a later period of our narrative, when these may appropriately form a distinct topic of consideration; hence, no notice has been taken of the efforts of travellers and writers to procure comparative tables of words and phrases. The principal and most trustworthy compilers of vocabularies were the missionaries, who could not communicate theological doctrines to the untutored savage without a more careful study of the shades of meaning in words than ordinary intercourse would require. Much is due to the Jesuit and Franciscan priests; more to Mayhew, Eliot, Roger Williams, and their associates. Some useful additions were also contributed by traders, and other casual residents among the natives. Enough had been collected when Dr. Barton wrote to furnish attractive materials for study to philologists, not only in this country, but in Europe.¹

From what has been said it will be seen that, before the close of the last century, men of science in the United States had become warmly interested in the vestiges of ancient art which had been discovered; and, supposing the amount of knowledge of the subject possessed by learned men in 1787, to be indicated by Jefferson's opinion that there existed "no remain as respectable as would be a common ditch for the draining of lands," a few succeeding years had certainly witnessed rapid advances of information, derived from nearly every portion of our national territory, and relating to extraordinary and mysterious monuments of antiquity. It is undoubtedly true that, before 1800, the existence of tumuli and inclosures in great numbers, and of imposing magnitude, throughout the valley of the Mississippi, at least on its eastern side, and from the Gulf of Mexico to the Lakes, was well known to the public; and, moreover, that many of the principal localities had been pointed out, some of the works had been described with great particularity, and collections had been made of the curious contents of the mounds. The inclosed works were generally regarded as *fortifications*, and were supposed to demonstrate the former possession of the country by a people skilled in the means of military defence.

In 1803, two well educated gentlemen, of observing habits of mind, were examining these structures at no great distance from one another, but on opposite sides of the Ohio River, and came to very different conclusions respecting their original purpose. One of them, Bishop Madison, of Virginia, became satisfied that the parapets and inclosures were never intended for military uses; and gave his reasons at length in a letter to Dr. Barton, which was read before the Philosophical

¹ Among the foreign correspondents of Dr. Barton, was Sir Joseph Banks, President of the Royal Society. In 1795, Sir Joseph sent over some specimens of earthenware found near Lake Huron, in "the ruins of an ancient town," by Dr. Nooth, of Quebec.—*Massachusetts Magazine* of Oct. 1795.

In 1796, the celebrated French philosopher, Volney, travelled through many of the Western States, and collected a vocabulary of the language of the Miamis. He saw mounds at Cincinnati, and in Kentucky; and, from the account of the works at Muskingum, did not think they exhibited evidence of military art.—*Volney's "View," &c., translated by C. B. Brown, Phil., 1804.*

Society, and published a few years later in one of its volumes. The other, Rev. Thaddens Mason Harris, of Massachusetts, was disposed to agree with the prevailing opinion, that they must have been places of defence.

It appeared to Bishop Madison that such remains were too numerous, too various in form and dimensions, and often too unfavorably situated to be regarded as fortresses; while certain striking features, in which they all agreed, indicated one common origin and destination. The lowness of the walls, the fact that the ditch was generally within, the whole being usually commanded by natural or artificial elevations without, were circumstances that, in his judgment, pointed to some very different design. The mounds he considered as burial-places, raised by the gradual accumulation of deposits. He does not allude to the conjecture which had been ventured by some, that the supposed forts were *sacred inclosures*, and the elevated squares areas of temples, or *places of sacrifice*.

Mr. Harris, on the other hand, adopting from Clavigero his account of the emigration of the Toltecs from the North, ascribed to them the construction of the "fenced cities," whose walls of earth he imagined to have been surmounted by palisades, and to have been intended for protection in the gradual progress of that people through the territories of less civilized tribes.¹

These gentlemen are often cited as pioneers in this field of investigation. They are among the first who, uniting opportunities of personal observation to the advantages of scientific culture, imparted to the public their impressions of western antiquities. They represent the two classes of observers whose opposite views still divide the sentiment of the country; one class seeing no evidences of art beyond what might be expected of existing tribes, with the simple difference of a more numerous population, and consequently better defined and more permanent habitations; the other finding proofs of skill and refinement, to be explained, as they believe, only on the supposition that a superior native race, or more probably a people of foreign and higher civilization, once occupied the soil.

The official expedition of Capts. Lewis and Clark to the sources of the Missouri, in the years 1804, 1805, and 1806; and that of Lieut. Pike to the sources of the Mississippi, and through the western parts of Louisiana in the years 1805, 1806, and 1807, were productive of very little increase to the stock of archæological information; although Allen's narrative of the former contains a drawing of earth-works observed on the Missouri, near Bon Homme Island.

Robin, a French naturalist, who was in Louisiana in 1805, described the remarkable tumuli near the junction of the Washita and Tœnsa rivers.² The account of these in the memoir of Messrs. Squier and Davis, is derived from Major Stoddard's "Sketches of Louisiana," published in 1812. In his brief chapter on the remains of antiquity at the West, that author expresses the opinion that "Till we are better informed, it seems fair to attribute them to the Welsh."³

¹ "Journal of a Tour in the Territory Northwest of the Alleghany Mountains in 1803, &c."

Rev. Dr. Harris was subsequently an active and distinguished officer of the American Antiquarian Society, and contributed to that institution many valuable relics, and some MS. notes of observations.

² "Voyage dans Louisiane, &c., par C. C. Robin, Paris, 1807."

³ Stoddard's Sketches, p. 347.

The Portfolio, in 1810, furnished an excellent plan of one of the most unquestionable works of defence to be found in the country, and also the most elaborate and extensive, situated on the east bank of the Little Miami, in Warren County, Ohio. In 1814, the same periodical contained other accounts and drawings of remains found in different localities, and in that year Mr. Brackenridge published his "Views of Louisiana," with a sensible chapter, and some notes, devoted to the subject of antiquities.

In 1812, an organization was first adopted for promoting the study of antiquities, and collecting and preserving the materials of our national history. The need of such a measure had become apparent; objects of archæological interest were known to exist in great numbers; but in the crude and defective state of information respecting them, no inferences worthy the name of scientific deductions could be derived from the features they presented. Not only accurate delineations and trustworthy descriptions, but aggregation and classification, were wanting to a development of their real nature and probable origin. Generations of forests, it was asserted, had flourished and decayed over curious relics and surprising works of art. Gigantic bones had been disinterred from the morasses of the West. Vestiges of human forms of unnatural dimensions, were supposed to have been discovered. The valley of the Mississippi was like a wonder-book, full of marvels and mysteries, and productive of vague and dreamy lucubrations. While men of education were reviving one or another of the many theories of colonization from the old world, at some dim and distant period, faintly indicated by history or tradition, another class convinced themselves that giants and pigmies had, in turn or together, inhabited that region.

Among those who were impressed with the importance of subjecting these questions to scientific scrutiny, and seasonably securing facts of every kind, necessary to the completeness of American history, in its relation both to the past and the future, was Isaiah Thomas, an eminent printer and publisher, of Worcester, Massachusetts. He did not confine himself to personal influence and exertions, but, as a literary nucleus to the proposed institution, offered the gift of his private collection of rare and curious books, valued at not less than five thousand dollars. The design found favor with many gentlemen of literary and political prominence; and, in October, 1812, the AMERICAN ANTIQUARIAN SOCIETY was established, with an act of incorporation from the Legislature of Massachusetts. It was supposed that the United States Government had not constitutional power to grant charters to public societies without the District of Columbia. For some reasons of convenience, to which pecuniary inducements were afterwards added, the institution was located at Worcester, the residence of Mr. Thomas, who had been chosen its President.

The war with Great Britain, and the Indian hostilities which had been excited throughout the West, rendered the period an unfavorable one for active researches. Immediate measures were, nevertheless, adopted to awaken public attention, and prepare the way for future success. Meetings were held at which addresses were delivered that were afterwards printed and circulated. Members were selected from all parts of the Union, and the correspondence of persons who had manifested an interest in historical and antiquarian studies, was earnestly solicited. Valuable

communications were from time to time received, some of which are inserted in the first volume of the Society's Transactions.

When peace was restored, and the interior of the country tranquillized, a lively spirit of inquiry sprang up in the midst of the antiquities to be investigated. Men of intelligence at Lexington, Ky., at Cincinnati, and in other parts of Ohio, resorted to accurate measurements of works in their neighborhood, and to excavations for the purpose of ascertaining the contents of the mounds. Among the most enterprising of these was Caleb Atwater, of Circleville, Ohio, a village deriving its name from a remarkable aboriginal structure that occupied its site, and which it destroyed.

At the request of the President of the Antiquarian Society, and assisted by him with pecuniary means, Mr. Atwater undertook to prepare a comprehensive account of the antiquities of the Western States, with plans of the principal earthworks, and drawings of the most characteristic relics. This was published by the Society in 1820, and occupies the greater part of the first volume of "*ARCHÆOLOGIA AMERICANA*."

Thus, a connected and authentic representation of these objects of interest and curiosity was at length accomplished; and in a manner that, under the circumstances, must be regarded as highly creditable, both to the author, and the institution under whose auspices it was effected. Considering the difficulties that were to be surmounted in tracing lines often buried in forests, and otherwise obscured by time, before repeated observations had assisted the judgment, the surveys are more accurate than could reasonably be anticipated. When we take into view the fact that almost every writer on the subject, thus far, had been engaged in determining by what foreign people the mounds and fortifications might have been reared, rather than in seeking in the works themselves to find their true significance and history, the treatise of Mr. Atwater is entitled to the praise of being more than ordinarily practical, and free from visionary tendencies; while its claims to the general merit of faithful and comprehensive research have not been impaired by later investigations.

It is not surprising that Mr. Atwater should indulge to some extent in the seductive practice of premature speculation, instead of confining himself to a simple exhibition of facts; but he did not arrange or employ the latter for the support of any peculiar theory or private opinion. If the literary merits of his narrative are not of a high order, he escaped the dangers of an ambitious and imaginative style of description. He was greatly assisted by other gentlemen at the West, whose attention had been directed to particular localities. From many he received drawings and useful information acknowledged in his work. Great credit is due to Dr. Daniel Drake, for the sensible account of the antiquities of the Miami country, contained in his "*Picture of Cincinnati*," published in 1815.

The "*Western Gazetteer*," compiled by Samuel R. Brown, in 1817, embraced in its statistics the known antiquities of the States to which it refers; and in the same year, De Witt Clinton read before the Literary and Philosophical Society of New York, his memoir on the antiquities of that State, having previously touched upon the subject of aboriginal remains in a discourse before the Historical Society, in 1811.

By these publications, and others of a more limited and incidental nature, near the same period, the preparation of Mr. Atwater's summary was doubtless facilitated.

The first volume of the *Archæologia Americana* contains, besides the principal memoir, communications from various correspondents of the Society, relating to the same subject, and bearing different dates, from 1815, to 1820.

Among these is a series of characteristic papers by the learned Dr. Samuel L. Mitchell; who, as chairman of the Committee on Indian affairs in the United States Senate for several years, had been accustomed to a good deal of intercourse with the aborigines.

The work, as a whole, may probably be regarded as an exponent of the opinions of investigators at that period, as well as an embodiment of facts which had then been ascertained.

Mr. Atwater assumes that the *present* race of Indians was most numerous near the sea, and in the northern and eastern portions of the United States, as shown by the greater quantity of arrow-heads, and other implements of war and peace, found in those regions; that of the few *earthworks* discovered east of the Alleghanies, the most northerly is near Black River, south of Lake Ontario, in New York, and the most easterly at Oxford, on the Chenango river, in the same State; while west of the Alleghanies, and as far as the Rocky Mountains, tumuli are numerous; and in the eastern valley of the Mississippi, remains of a more remarkable character are met with, from the Lakes to the Gulf of Mexico, that gradually increase in size and frequency towards the south. Some of these structures he believes to have been fortifications; others sacred inclosures, with their mounds of sacrifice, or sites of temples; others places of diversion; and others mounds of burial.

The contents of the tumuli are described as articles of pottery, implements and ornaments of stone, similar to those of modern Indians; figures wrought in stone; carved pipe-bowls; articles of copper, such as tubes, bracelets, arrow-heads, pipes, &c., of rude workmanship; beads of bone or ivory; mirrors of mica; marine shells; and, in a few instances, ornaments *plated with silver*. Knives and swords of iron were also supposed to be indicated by their oxidized remains.

The skeletons from the mounds are represented as those of a people unlike our present Indians—the latter being tall, slender, and straight-limbed; the former short and thick, rarely over five feet in height; their faces short and broad, with rather high cheek bones; their foreheads low, their eyes very large, and their chins broad.

The relics were said to be found, in some instances, at the bases of excavated mounds, in connection with one or more skeletons lying upon hearths or altars of burnt clay; the whole having been subjected to the action of fire, implying a ceremonial of sepulture or sacrifice, followed by the heaping of earth upon the remains.

Plans are given of the most prominent works in Ohio; where are found nearly all the varieties of form and construction which had then been recognized, except such as belong to the States bordering on the Gulf of Mexico. Concerning the latter, Mr. Atwater's information was limited to general accounts of inexact observations; and he does not undertake to exhibit their figures or dimensions, although some relics from that section are engraved with those of other parts of the country.

The growth of generations of forests over these remains, and the changes in the levels and courses of streams on whose ancient banks they are situated, are applied

as tests of their antiquity. The mathematical accuracy of squares and circles inclosing large areas, often many acres in extent, is adduced as evidence of scientific culture. The indications of improvement in art, and apparent increase of population, observable in following the courses of the streams towards the south, are received as proofs of migration from the north, protracted, perhaps, and with long intervals of interruption, but still ever progressive in one direction.

These data, and others of a similar character, were naturally made the basis of conjectures respecting the people to whom the vestiges of ancient residence and ultimate removal should be ascribed.

On this point there appears to have been a general coincidence of opinion among those who occupied the position of authorities at the time of Mr. Atwater's publication.

That the inhabitants of America were chiefly descended from two branches of the same Asiatic family, was a doctrine advocated by the learned Dr. Hugh Williamson in 1811 and 1812—the arts of civilization being, in his judgment, traceable to the Hindoos.¹ Dr. Mitchell, whose multifarious erudition sometimes impaired the definiteness and consistency of his reasoning, had taken the ground, in 1815, that “the original inhabitants of America consisted of the same races with the Malays of Australasia, and the Tartars of the North;” that the former landed in North America, and penetrated across the continent to the region lying between the Great Lakes and the Gulf of Mexico, where they constructed the fortifications, mounds, &c.; and that they were probably overcome by the more warlike and ferocious hordes that came from the northeast of Asia, and were the ancestors of the present race. In 1816, he claimed to establish these hypotheses “by a process of reasoning not hitherto advanced,” and, at the close of his argument, declares: “I forbore to go further than to ascertain by the correspondences already stated, the identity of origin and derivation of the American and Asiatic nations, avoiding the opportunity that grand conclusion afforded me of stating that America was the cradle of the human race. I had no inclination to oppose the current opinions relative to the place of man's creation and dispersion, and thought it scarcely worth while to inform a European that on coming to America he had left the *new* world behind him, for the purpose of visiting the OLD.” At a later period of the same year he gave another exposition of his views, repeating his assertion that the physiognomy, manufactures, and customs, of the North American tribes of the middle and low latitudes, and of the South Americans, show them to be nearly akin to the Malay race of Australasia and Polynesia. But a new element had entered his calculations, from a suggestion of De Witt Clinton, that some of the “old forts” in New York were of a *Danish* character. “In the twinkling of an eye,” he says, “I was penetrated by the justness of his remark. An additional window of light was suddenly opened to me.” He then proceeds to the supposition, that the Danes, or Finns, and the Welshmen (for he puts the followers of Madoc and the Scandinavians together) performed their migration gradually to the southwest, and fortified them-

¹ Some account of the aborigines of America, in his “Observations on the Climate,” &c. Hist. of North Carolina, I, appendix B.

selves in the country south of Lake Ontario. There the Tartars or Samoiedes found them; and having first exterminated the Malays, who had advanced along the Ohio and its tributaries, had a harder task to subdue the warlike Europeans entrenched and fortified in the country. The Scandinavians, he thinks, were ultimately overpowered in New York, and finally retreated to Labrador.

The theory that the mound-builders came from India, or were of a common origin with the Hindoos, was greatly strengthened by the discovery in Kentucky of a piece of pottery, fashioned in the form of three human heads united at their backs with a vase, which they supported. It was commonly called the "Triune idol, or vessel." "Does it not represent the three chief gods of India—Brahma, Vishnoo, and Siva?" is the exclamation of Mr. Atwater. Moreover, no less than nine murex shells had been found in the same State, within twenty miles of Lexington. Shells so highly esteemed in India, and consecrated to the god Mahadeva, corresponding to the Neptune of the Greeks and Romans.

These articles had been collected by Mr. John D. Clifford, of Lexington, a rival, and sometimes antagonist of Mr. Atwater, in the field of archæological research; who, while the latter was preparing his notes for the press, was aiming, in a series of articles in the "Western Review," to demonstrate the proposition that the mound-builders were the ancestors of the Mexicans, and descended from the ancient Hindoos.

Mr. Clifford's argument, and his investigations, were both suddenly arrested by his death; yet they doubtless had an influence in strengthening the views of his contemporary.

Mr. Atwater's opinions are expressed in the following extracts:—

"The Scythians, from whom the Tartars are descended, in all probability first peopled the British Isles. The fact that our works are in all respects like those in Britain, and that similar works may be found all the way from this part of America to Tartary, furnishes no contemptible proof that the Tartars were the authors of ours also. But were the ancestors of our North American Indians the authors of our works? Had not such an opinion been advanced by some great and good men in the United States, the foundation on which it rests is so frail, that I certainly should not trouble myself or my readers to refute it."

"Have our present race of Indians ever buried their dead in mounds? Have they constructed such works as are described in the preceding pages? Were they acquainted with the use of silver, or iron, or copper? All these, curiously wrought, were found in one mound at Marietta. Did the ancestors of our Indians burn the bodies of distinguished chiefs on funeral piles, and then raise a lofty tumulus over the urn that contained their ashes? Did the North American Indians erect anything like the 'walled town' on Paint creek? Did they ever dig such wells as are found at Marietta, Portsmouth, and above all such as those on Paint creek? Did they manufacture vessels from calcareous breccia, equal to any now made in Italy? Did they ever make and worship an idol representing the three principal gods of India?"

"An idol found in a tumulus near Nashville, Tennessee, and now in the museum of Mr. Clifford, of Lexington, Kentucky, will probably assist us in forming some idea as to the origin of the authors of our western antiquities. Like the 'Triune

vessel' hereafter mentioned, it was made of a clay peculiar for its fineness, which is quite abundant in some parts of Kentucky. This idol represents a man in a state of nudity, whose arms have been cut off close to the body, and whose nose and chin have been mutilated; with a fillet and cake upon his head. In all these respects, as well as in the peculiar manner of plaiting the hair, it is exactly such an idol as Professor Pallas found in his travels in the southern part of the Russian empire.

"The idol discovered near Nashville, shows from whence its worshippers derived their origin and religious rites. The 'Triune idol, or vessel,' shows, in my opinion, that its authors originated in Hindostan, and the one now under consideration induces a belief that some tribes were from countries adjacent.

"If the ancestors of our North American Indians were from the northern parts of Tartary, those who worshipped this idol came from a country lying further to the south, where the population was dense, and where the arts had made great progress. While the Tartar of the North was a hunter and a savage, the Hindoos and southern Tartars were well acquainted with most of the useful arts. The former (the Tartars of the north), lived in the vicinity of our continent, and probably found their way hither at an early day, while the latter came at a later period, bringing along with them the arts, the idols, and religious rites of Hindostan, China, and the Crimea. The ancestors of our North American Indians were mere hunters; while the authors of our tumuli were shepherds and husbandmen. The temples, altars, and sacred places of the Hindoos were always situated on the bank of some stream of water. The same observation applies to the temples, altars, and sacred places of those who erected our tumuli. At the consecrated streams of Hindostan devotees assembled from all parts of the empire, to worship their gods, and purify themselves by bathing in the sacred water. In this country, the sacred places were uniformly on the bank of some river; and who knows but that the Muskingum, the Scioto, the Miami, the Ohio, the Cumberland, and the Mississippi, were once deemed as sacred, and their banks as thickly settled, and as well cultivated, as are now the Indus, the Ganges, and the Burrampooter!

"Ablution, from the situation of all the works which appear to have been devoted to sacred uses, was a rite as religiously observed by the authors of our idols, as it was neglected by our North American Indians. If the coincidences between the worship of our people and that of the Hindoos and southern Tartars furnish no evidence of a common origin, then I am no judge of the nature and weight of testimony."

Mr. Atwater assigns a very early period for the migration of these people into the territory now included in Ohio, as indicated by the rude state of many of the arts among them, and the proofs of primitive times seen in their manners and customs. He thinks the numerous cemeteries are evidences of long residence; and that, while contending against foes from the northeast, they moved gradually down the streams towards the country where they finally settled.

As this work was the first in which a consideration of North American antiquities was based upon elaborate explorations, and as it was prepared at the instance, and published under the sanction of a scientific association, the conclusions it seemed to

justify deserve to be carefully stated. They doubtless exerted an important influence upon subsequent speculations, but cannot be held answerable for the vagaries of enthusiastic and visionary writers. The points in whose favor the "Archæologia Americana" gives the weight of its opinion, are 1st. That the vestiges of antiquity in the United States are indicative of the former occupation of the country by a people having a regular government and laws, and possessing many of the customs, arts, and institutions of civilized communities. 2d. That they were not the ancestors of the modern tribes of Indians; but probably retired to Mexico and Peru, and founded the semi-civilized empires that were encountered and overcome by Cortes and Pizarro. 3d. That, with some exceptions of insufficient magnitude and permanency to affect the general characteristics of the people, the American races, ancient and modern, were derived from different portions of Asia. 4th. That the early inhabitants were very numerous, and occupied fixed abodes for long periods of time.

These are a sufficient foundation for the support of many visionary hypotheses, and were susceptible of indefinite enlargement and extension from the same materials, and such others as might from time to time be added to them.

It may be well to leave, for a moment, the chronological order of narration, for the purpose of introducing together the most remarkable instances of fanciful deduction, resulting from this stage of discovery, and the prevailing tendency of public sentiment.

In 1823, Mr. John Haywood published an 8vo. volume of 450 pages, entitled "The Natural and Aboriginal History of Tennessee, up to the first settlements therein by the White People." A small portion of the work only is devoted to the natural or physical history of the State. The aboriginal history commences with a comparison of the Mexicans and Peruvians with the Hindoos and Persians, the Natchez Indians with the Mexicans, and the ancient inhabitants of Tennessee with both the latter. Not only are all admitted discoveries of an archæological nature, pressed into the service of this examination, but many of doubtful authenticity, and circumstances irrelevant as well as unverified, are made to swell the mass of analogies which the writer has accumulated. With the aid of these he undertakes to compile a history of the ancient Tennesseans, applicable also to other Western States, describing the ceremonies and superstitions of their religious faith, their civil polity, their sciences and arts, their games and pastimes, &c. &c., with a particularity that could hardly be surpassed in a history of a living and familiar people. We are told, among other things, that they burnt incense on their high places, to the sun, moon, and planets, and to the host of heaven; that they placed altars on their mounds, and sacrificed human beings; that in worshipping, they stood towards the east, and lifted up their hands towards heaven, and towards their idols; that they venerated the number three, and worshipped *triune idols*; that they deemed the cross a sacred symbol; that they used the conch-shell as emblematic of the properties of their god of the ocean; that they made wells, walled up with stone from the bottom; that they had swords of iron and steel, and steel bows, and mirrors with iron backs; knives of iron, with ferules of silver, and iron chisels and spades; that they buried their sacred animals; that they made bricks and burnt them, and used

both them and stone in their buildings; that their complexion, hair, and eyes were like those of the Baroans of Chili;¹ that their stature was of the common size; but that of their exterminators—a new and modern race, like the Gauls in the time of Lucullus—was frightfully gigantic; that those same marauders, who, from the 7th to the 11th centuries of the Christian era converted the cultivated fields of Italy into a wilderness, came hither also, searching through all the corners of the world for plunder and subsistence; and that the new comers into America worshipped a spiritual God, without mounds, idols, or human sacrifices.

All these things, and much more, the author claims to be able to prove respecting the primitive inhabitants of the country watered by the Ohio and its branches; who came, as he believes, from the *South*, and had intimate connections with the people of Mexico, and some intercourse with the Peruvians and Chilians. Anticipating that the reader may regard his programme as somewhat conjectural, he declares that “it will soon be converted into real history.”

The writer’s facility of belief is not limited to the necessary support of his principal theory; but is extended to the accounts of pigmies, whose remains had been disinterred in large numbers, and to the discovery of Roman coins, that must have been buried before the age of Columbus, and to vestiges of the sanctity of the number seven.

Of a somewhat similar character, and not less remarkable, are the “Ancient Annals of Kentucky,” by Prof. C. S. Rafinesque—prefixed to Marshall’s History of that State, printed in 1824.

Beginning with the origin of the human race, the learned Professor accepts the tradition that mankind was created in Asia, and follows down the course of generations and migrations with surprising minuteness. Having reached the proper period, he informs us that “the principal nations of the eastern continent, which have contributed to people North America and Kentucky, were the Atlans and Cutans, who came easterly, through the Atlantic Ocean; and the Iztacans and Oghuzians, who came westerly, through the Pacific Ocean.”

The history of those two nations, and of their settlements in America, he divides into five periods: “1st. From the dispersion of mankind to the first discovery of America, including several centuries. 2. From the discovery of America (by the Atlans, Cutans, &c.) to the foundation of the Western empires, including some centuries. 3d. From the foundation of those empires to the Pelagian revolution of nature, including several centuries. 4th. From the Pelagian revolution to the invasion of the Iztacan nations, including about twelve centuries. 5th. From the Iztacan invasion to the decline and fall of the Atlan and Cutan nations in North America, including about thirty centuries to the present time.”

The details of incidents in these periods are so fully recorded as to leave little to be desired in the way of precise information. A chronological chart of events happening in North America from the beginning, presents the succession of peoples and empires, with a lavish profusion of names and pedigrees, and an air of intimate

¹ *i. e.* that is comparatively light, and of variable tints.

acquaintance with their civil and religious customs, and the motives and results of military operations, which seem to imply the possession of an insight the reverse of prophetic, but equally supernatural. He informs us that several other nations, besides the Atlans, Cutans, Iztacans, and Oghuzians, had reached various parts of America before the modern Europeans; such as the Mayans or Malays, the Scandinavians, the Chinese, the Ainus of Eastern Asia, the Nigritians or African negroes, &c.; but, as they did not settle in or near Kentucky, they did not fall under his present scope. He states that the country watered by the Ohio and its branches was the centre of the Atalan empire, which was divided into several provinces, and was ruled by a powerful monarch of the Atlas family; that an intercourse was kept up, more or less regularly, between all the primitive nations and empires, from the Ganges to the Mississippi; and that Krishna or Hercules, and Ramachandra, two heroes of India, visited Atala and the court of the western monarchs, which is called one of the heavens on earth by the holy books of the East. But, he says, the Atlantes of the interior of America were separated from the rest of the Atlantic empire by that dreadful convulsion of nature which is recorded in the oldest annals of many nations. In this cataclysm, which is signified by the division of the earth under Peleg, the flood of Ogyges or Ogug, and the Sanscrit convulsion of the White sea, or Atlantic ocean, many countries were destroyed or changed; and the eastern Atlantes thought the whole American continent had sunk, like the Atlantic and many Antillan islands. After this event, the history is of necessity, for awhile, more exclusively American. But, he tells us, in the lapse of centuries, a casual intercourse was restored between the two continents. The Caribs, who appear to be of Cantabrian origin, came to South America. The great nation of Guarini, of Daran derivation, had arrived earlier, and extended itself over Guiana, Brazil, and Paraguay. When the Arcutans or Femurians of Ireland were expelled by a tribe of the Gaels, they fled to Hayti, and became probably the Arohuac nation. Before the Christian era the Phœnicians traded to America. The Numidians and the Celts frequented Hayti 2000 years ago; and the Etruscans attempted to settle colonies in this country, but were prevented by the Carthaginians. Owing to numerous shipwrecks, and the warlike habits of the Caribs, Iztacans, and Oghuzians, this intercourse gradually declined, till the knowledge of America became almost lost or clouded in fables and legends.

The annals of Kentucky, however, are by no means interrupted; but continue to flow through intricate revolutions, which the author is fortunately able to describe, briefly, to be sure, but with great exactness, until the history is broken in upon and obscured by the arrival of the present race of Caucasian interlopers.

So perfect a revelation necessarily removes all mystery from the origin and purpose of the ancient remains of the Mississippi valley.

Mr. Rafinesque was a man of very considerable scholastic and scientific attainments. He was connected with Transylvania University as professor of Historical and Natural Sciences, and subscribes himself a member of many learned societies in Europe and America. He had been actively engaged in researches among the antiquities of the West, and left, at his decease, a manuscript work on the subject, illustrated with drawings, which proved very serviceable to Messrs. Squier and

Davis in the preparation of their memoir. A list of seats of ancient population in North America, ascertained by him, is attached to his "Annals," of which he says, that out of 541, 393 are in Kentucky; and of 1830 monuments observed by him, 505 are in the same State. In 1836, he commenced at Philadelphia, the publication of "A General History, Ancient and Modern, of the Earth and Mankind in the Western Hemisphere; including the philosophy of American History, the Annals, Traditions, Civilization, Languages, &c., of all the American Nations, Tribes, Empires, and States." It was to be comprised in twelve volumes, of 300 pages each, and was dedicated to the Society of Geography of Paris, as a homage due to the public approbation given by that body to his first analogous labor, a series of researches on the origin of mankind.

Two volumes only, it is believed, were printed, which are far from being intelligible to a common capacity, or to ordinary erudition.¹

With the productions of Haywood and Rafinesque, may be associated that of Josiah Priest, upon "American Antiquities and Discoveries in the West," published in 1833. We are informed, in the title page of the fifth edition of this book, that twenty-two thousand copies had been printed within thirty months, for subscribers only. It must therefore have had a wide circulation, and perhaps a corresponding degree of influence on the opinions of certain classes of readers. It is a collection of odds and ends of theories and statements, relating, more or less directly, to American antiquities, many of them derived from Rafinesque—a sort of curiosity-shop of archæological fragments, whose materials are gathered without the exercise of much discrimination, and disposed without much system or classification, and apparently without inquiry into their authenticity. It is not strange that references should sometimes be rather confused, and labels be occasionally misplaced. It must be in some such way that Prof. Horn, whose treatise "De Originibus Americanis" we have had occasion to mention, comes to be represented as "a son of Theodosius the Great, Emperor of the West, who lived in the third century!"²

To return from these eccentricities to the period of Mr. Atwater's publication,

¹ Mr. Rafinesque was a laborious student in almost every conceivable department of knowledge, and only wanted the faculty of judicious discrimination to secure him a distinguished name among men of science. He was of foreign birth, and had been a resident in Sicily, and first travelled in the United States in 1802, 1803, and 1804. Before 1815, he had published a very considerable number of treatises, chiefly upon natural history, from observations in this country and in Sicily, with others of a more general character. In 1815, he returned to America, and had the misfortune to be shipwrecked on the coast; losing, according to his own statement, all his "books, manuscripts, plates, drawings, maps, herbarium, collections, minerals, &c., the fruit of twenty years' labors, exertions, and travels." Some of his lost MSS. on botany, zoology, mineralogy, &c., he undertook to re-write, and endeavored to obtain subscriptions for their publication here. In 1838, he printed an essay introductory to a proposed work, to be entitled "Researches on the Antiquities and Monuments of North and South America." He died at Philadelphia, in 1840.

² Rafinesque, who did not relish the use made of his own theories, charged Priest with asserting that Noah's ark rested in America, and that he had three sons—one white, one red, and one black! This statement does not appear to be quite correct, unless Mr. Priest's expressions were modified in the later editions of his work.

we find the field of research gradually extending its limits, and the results of investigation discussed in various connections.

In 1819, Professor Silliman, of Yale College, established his "American Journal of Science," which, associated with geological and other scientific observations, contains many interesting notices of antiquarian discoveries. The first volume has an account of remarkable remains on the Etowee (or Hightower) river, in Georgia, by Rev. Elias Cornelius, afterwards a distinguished clergyman of Massachusetts; and another of mounds in East Tennessee, by Mr. John H. Kain, of Knoxville.

The same year, David Thomas printed his "Travels through the Western Country, in the Summer of 1816," with notices of antiquities, and a dissertation of more than twenty pages on the ancient inhabitants of the United States.

In 1820, Sir Gilbert Blane, Bart., communicated to the "London Quarterly Journal of Science and Arts," a letter addressed to Dr. Mitchell, on the antiquities of New York.

Nuttall's "Journal of a Tour in Arkansas," appeared in 1821; and in 1822, Jacob B. Moore, Esq., of New Hampshire, made known to the Antiquarian Society the very interesting and important fact of the former existence in that State of an extensive fortification in Sanbornton, near Lake Winnipisiogee. It was represented as a double inclosure, perfectly symmetrical in form, having mounds at the entrances, and a large one without the walls, in the manner so common at the West. The walls were of stone externally, filled in with clay, shells, and gravel; and, when first discovered, about eighty years before, were breast high, and six feet in thickness, and had evidently diminished considerably in height since their erection.¹ Unless certain traces of regular embankments on the Merrimack, near Concord, also mentioned by Mr. Moore, are to be excepted, this is believed to be the only instance, east of New York, of an inclosure like those so common beyond the Alleghanies.

During a few succeeding years, we are not aware that the archæology of the United States was advanced or elucidated by the development of new features, or the conception of new hypotheses deserving consideration. Mr. Atwater's Memoir was received with much favor, and read with great interest both at home and abroad. The celebrated Dr. Adam Clark wrote to Mr. Duponceau, expressing the delight and instruction with which he perused it. After referring to the mounds, forts, and gigantic rings or stone circles of Ireland, as not unlike those on the Ohio, and as little understood, but which, with certain customs and habits of the Irish, he supposes to be of Asiatic derivation, he declares himself particularly struck with what in the memoir is called the "Triune Vessel," as telling a more direct tale of Asiatic origin than anything else in the volume.²

In local histories, gazetteers, &c., the subject was sometimes discussed at considerable length, and with occasional additions to the list of remains. Thus, Beck's "Gazetteer of Illinois and Missouri," published in 1823, Yates and Moulton's

¹ Belknap, Hist. of New Hampshire, III, 89, speaks of "the appearance of a fortress at Sanbornton, consisting of *five distinct walls*."

² The letter is in the 2d vol. of the Transactions of the American Antiquarian Society.

History of New York," in 1824; "Flint's Recollections of the Mississippi Valley" in 1826; and "Macauley's History of New York," in 1829, are often referred to. In the two histories of New York above named, the subject of American antiquities is treated of at considerable length. In the *American Journal of Science and Arts*, (Vol. III, p. 37) is an account of a fortification on the Arkansas River, 320 miles from its mouth, inclosing about twenty-five acres, with a wall eight feet high, and a ditch twenty-five feet wide; and having in the centre two mounds about eighty feet in height.¹

Although the general sentiment was in favor of attributing the ancient monuments of the United States to a race or races entirely distinct from our Indian tribes, there were those who, with unusual means and opportunities of forming an enlightened judgment, adopted a different opinion, and upon grounds entirely aside from those philological and physiological considerations that will presently be adverted to.

A prominent argument opposed to the descent of the Indians from the mound-builders, had been the absence of traditions among the savages, pointing to such a connection, and their entire ignorance of the purposes for which the structures were designed. Yet it is not true that real or pretended traditions are entirely wanting. The Senecas related to the missionary Kirkland, that the fortifications in their territory were raised by their ancestors in their wars with the western Indians, three, four, or five hundred years before—they having no very definite idea of the time;² and Indian Legends have been more common than faith in the sincerity of the narrators.

The most particular and pertinent traditions referring to ancient fortifications, are those collected from the Delaware Indians (Lenni Lenape) by Rev. John Heckewelder, the Moravian missionary.³

According to these, the ancestors of the Delawares resided many hundred years ago far away in the western part of the American continent. For some reason, they determined on migrating to the eastward, and set out together in a body. After a long journey, they came to the Mississippi, where they fell in with the Mengwe or Iroquois, who had likewise emigrated from a distant country, and were also proceeding eastward until they should find a land that pleased them. The spies sent forward by the Delawares had already discovered that the region east of the Mississippi was inhabited by a powerful nation having many large towns built on the rivers flowing through their land. These people called themselves Tallegewi or Allegewi. They were remarkably tall and stout, and had regular fortifications or entrenchments.

The Delawares sent a message to the Allegewi, asking permission to settle in their neighborhood. This was refused, but leave was given them to pass through the country in search of a residence beyond. But when they began to cross the river the Allegewi, alarmed at their numbers, attacked them with great fury, and threatened them with destruction if they persisted in their attempt.

¹ Letter from L. Bringier, Esq., to Rev. Elias Cornelius.

² Mass. Hist. Coll., 1st se., IV., 106. See also Cusie's "Ancient Hist. of the Six Nations."

³ "Account of the History, Manners, and Customs of the Indian Nations who once inhabited Pennsylvania and the Neighboring States," in Trans. of Hist. and Lit. Committee of the Am. Phil. Soc'y, I., 1819.

Indignant at such treachery, the Delawares and the Mengwe united their forces and declared war against the Allegewi. The enemy fortified their large towns, and raised entrenchments on large rivers and near lakes, which were attacked and sometimes stormed by the allies. No quarter was given; and after the war had lasted many years, the Allegewi at last abandoned the country to the victors, and fled down the Mississippi river, from whence they never returned.

The Delawares charged the Mengwe with hanging back always and leaving them to face the enemy. But in the end they divided the conquered land between them, the Mengwe choosing the vicinity of the Great Lakes, and the Delawares taking possession of the country further south.

The tradition continues, giving an account of subsequent wars with the Mengwe, (better known as the Iroquois), and the ultimate confederacy of the Five Nations.

This is a simple story, viewed by itself, containing nothing marvellous or incredible. Yet the traditions recorded by Heckewelder, taken together, have not been regarded as entitled to confidence. He has been charged with credulity, and even suspected of a desire to embellish his narrative. It is also declared that no reliance can ever be placed on the legends of the Indians, as they are usually invented to amuse or mystify the inquirer.

Admitting this to be the case as a general rule, still the statements of the Moravians should be fairly considered in connection with the circumstances under which their information was obtained.

These "United Brethren," as they best liked to be called, who sought, in their system of organization, to combine the simple social habits and the apostolic office of the primitive Christians, came to Pennsylvania about the year 1740.

Their communities had been driven from Bohemia to Moravia, and were everywhere persecuted. Under the guidance of Count Zinzendorf, at once their protector and their leader, they found a partial security at home, just enough to enable them to become the nurseries of missionary enterprise abroad. Seeking opportunities to spread the gospel among the heathen wherever they might be found, their first mission in this country was with the Indians of Georgia. The hostilities of the English and Spanish claimants of jurisdiction, between whom they were not permitted to retain a position of neutrality, compelled them, after a few years' residence, to remove from that section of the United States.

Their efforts were then directed to the conversion and civilization of the Delawares, the Iroquois, and the Mohegans, among whom they labored with great perseverance for many years. Their influence over the natives even exceeded that of the Jesuits and Franciscans of an earlier period; and communities of converts grew up around the solitary posts of the preachers far in the wilderness. Constantly pressing towards the interior, in 1772 they had villages beyond the Ohio, where the savage assumed the habits and adopted the worship of civilized men. Living in the midst of their pupils, directing their agricultural labors, and working with them, the missionaries gained their affections while they studied their habits and mental peculiarities, and prepared dictionaries and grammars of their language. To Zeisberger, Pyrlæus, Schultz, and Heckewelder, philologists have been indebted for some of the most important materials used in their investigations.

However simple and credulous these men might be, they were not without intelligence and culture; and their sincerity was attested by their toils and sufferings. Their knowledge of Indian character and languages was of wide extent, and in Heckewelder's case of forty years' duration. If deceived by fictitious tales, it was not as inquisitive strangers that deception was practised upon them, but they were imposed upon by neighbors and familiar friends.

What Mayhew and Eliot had been to the aborigines of New England, the Moravians were to the Delawares and Iroquois; but with more protracted and more perfect intimacy. As the villages of Christian Indians in Massachusetts were broken up, one after another, as, in time of war, their occupants fell under suspicion, now of their own people, and now of the whites, and were massacred in turn by both; so the "Tents of Grace" of the Moravian converts were destroyed, and their "Beautiful Prospect" laid waste and made desolate. No enduring monument of the toils of those missionaries remains, except the vocabularies they collected, and the narratives they compiled; save that, in the names of some of their settlements which have been preserved, the memory of their pious endeavors may be transmitted.

Heckewelder's narrative, and even his linguistic accuracy, were, many years ago, subjected to severe criticism by one of our prominent statesmen, Hon. Lewis Cass.¹ Few men of education have had better opportunities than Governor Cass, of acquiring a knowledge of the characteristics, customs, and capacities of the Indians. He has lived among them, explored their distant abodes, and dealt with them in many different relations; and his opinion is entitled to great weight on all points connected with their history. It is proper, however, to remark that he belongs to that class of writers who are careful to divest the character of the aborigines, as well as their history and antiquities, of all romantic and poetical coloring.

In the article referred to, Governor Cass describes Heckewelder as a worthy missionary, of moderate intellect, and still more moderate attainments, of great credulity, and strong personal attachments to the Indians, who had passed almost his entire life among the Delawares, and derived his knowledge of the natives wholly from them. Even the correctness of his interpretations is questioned; and it is said of him: "Every legendary story of their former power, and of their subsequent fall, such as the old men repeat to the boys in the long winter evenings, was received by him in perfect good faith, and has been recorded with all the gravity of history. It appears never to have occurred to him that these traditionary stories, orally repeated from generation to generation, may have finally borne very little resemblance to the events they commemorate; nor that a Delaware could sacrifice the love of truth to the love of his tribe. To those who know something about Indian traditions, nothing can be more unsatisfactory than these details, unless they are corroborated by the accounts of the early travellers, or by concurrent circumstances." Governor Cass also speaks of having listened to Heckewelder in his own house, "as anxious to hear as he was to relate the marvellous events of his intercourse with

¹ North American Review, for January, 1826.

the Indians; and when both narrator and hearer believed all that was told, and frequently in an inverse proportion to its probability.”¹

If the fact is admitted, as intimated above, that the tales communicated to Heckewelder were “traditionary stories, orally repeated from generation to generation by the old men to the boys,” they would seem to be entitled to all the faith that is ever due to merely traditionary evidence. But it has been generally denied that the Indians possessed any such system of transmission. Major Long, to whose observations Governor Cass refers, as according entirely with his own, says: “The knowledge they have of their ancestry is very limited; so much so that they can seldom trace back their pedigree more than a few generations; and then know so little of the place whence their fathers came, that they can only express their ideas upon the subject in general terms, stating that they came from beyond the lakes, from the rising or setting sun, from the north or south,” &c.²

Governor Cass’s experience of savage life, as viewed by him, if it might “point a moral” would hardly “adorn a tale.” He says: “The effect of Mr. Heckewelder’s work, upon the prevailing notions respecting Indian history, is every day more and more visible. It has furnished materials for the writers of periodical works and even of *history*; and in one of those beautiful delineations of American scenery, incidents, and manners, for which we are indebted to the taste and talent of our eminent novelist (Cooper), ‘the last of the Mohegans’ is an Indian of the school of Mr. Heckewelder, and not of the school of nature.”

We may reply that, romance is seldom a positive attribute of circumstances or things, but rather a quality in the mind of the observer. The very time and people from whence the term was derived, the age of chivalry itself, and the characters and habits of knights and troubadours, would hardly bear the test of a literal and unpicturesque delineation.

With regard to the possession of hereditary information by the Indians, respecting the origin or migrations of their ancestors, it is probably true, that their legends are too indefinite, and often too contradictory, to serve any useful purpose in the solution of archæological questions. They seldom relate to very remote periods of

¹ Governor Cass’s estimate of the capacity and information of Heckewelder does not accord with that of other persons who cannot be regarded as incompetent judges. The Historical and Literary Committee of the American Philosophical Society, in their Report of 9th January, 1818, say: “The intimate knowledge which this respectable missionary (Heckewelder), is known to possess of the languages and manners of various Indian nations, among whom he resided more than forty years, pointed him out to us as a person from whom much information could be obtained; nor were our hopes deceived. In answer to the inquiries of your committee, he laid open the stores of his knowledge, and his correspondence gives us a clear insight into that wonderful organization which distinguishes the languages of the aborigines of this country from all the other idioms of the known world. Mr. Pickering, in his preface to Eliot’s Indian Grammar, describes him as “the venerable Mr. Heckewelder, whose fidelity, and intelligence, and skill (in the Delaware dialect in particular), are beyond all question.” A reviewer of his Indian History in the “Portfolio” of September, 1819, calls him “a learned and inquiring man, doing good among this people, and possessing their confidence. His opportunities have been better than those of any person living to give the views which he has now presented to the public; and his character is a sure pledge for the fidelity of his work.”

² Expedition from Pittsburg to the Rocky Mountains, II, 371.

time; and the events to which they refer are often found, on examination, to have occurred since the arrival of the whites.

Although rejecting the traditions of the Delawares, which ascribe the defensive structures of the west to the Allegewi, Governor Cass is by no means disposed to attribute them to a foreign race, now removed or extinct. His opinion is expressed in the following paragraph from the same article to which we have been referring.

“The ancient fortifications scattered through the United States, and attributed by Mr. Heckewelder to these Allegewi, have been the fruitful source of abundant speculation. We have no doubt that they were erected by the forefathers of the present Indians, as places of refuge against the incursions of their enemies, and of security for their women and children when they were compelled to leave them for the duties of the chase. And much of the mystery in which this subject has been involved owes its origin to a want of due consideration of the circumstances and condition of the Indians. We do not reflect on their almost infinite division into petty tribes, and on their hereditary and exterminating hostilities. Nor have we reflected that the stone tomahawk is a very inefficient instrument for cutting timber into palisades; nor that, if fire be adopted as a substitute, the process is tedious and laborious. Their transportation too, must have been a serious objection to their use, and in a few years they required renewal. Even when otherwise proper, they were always liable to be burned by the enemy. These circumstances render it probable that the erection of earthen parapets was the most economical and desirable mode in which the Indians could provide for the security of themselves and those most dear to them. And their migratory habits will sufficiently account for the number of these works, without resorting to the existence of a dense population utterly irreconcilable with the habits of a people who have not yet passed the hunter state of life.”

This theory is at an opposite extreme from most of those which have thus far been considered. Neither the introduction of arts from other continents, nor the supposition of higher civilization here, nor even the probability of a denser population and more stationary habits of life, are deemed essential to explain the origin of those numerous and extensive structures. Their erection is held to be entirely consistent with the civil condition, the degree of mechanical skill, the manners and the wants of the savage, as these have been known to us since the settlement of the country.

A reaction of sentiment respecting the antiquities of the United States naturally followed the excessive credulity of which they were sometimes the subject, and the absurd theories often founded upon them. Other circumstances also materially affected the aspect of archæological questions, and gave a new direction to scientific inquiry. The most important of these was the progress now making in the analysis and comparison of the words and idioms of American languages. But before proceeding to speak of that branch of investigation, which deserves to be considered by itself, it is proper to notice a very elaborate and highly valuable work that appeared in 1829.

This was entitled “*Researches, Philosophical and Antiquarian, concerning the Aboriginal History of America*, By J. H. McCulloh, Jr., M. D.” It was the com-

pletion of a labor commenced by the author many years before, of which some partial results were printed in 1816. No more perfect monument of industry and patient research connected with this subject has been published. The author's field of inquiry was the whole American continent. He made no personal explorations, but contented himself with collecting under different heads the facts related by those who wrote from observation, and arranging with them analogies derived from every historical and literary source within his reach; thus forming a convenient cyclopedia of that kind of information. All that relates specifically to the mounds and fortifications of North America is contained in a brief appendix; but much of the entire work has a pertinent bearing upon the questions of their nature and history. It demonstrates with how little safety affinities of race, or an identity of origin, can be deduced from partial similarities of customs, arts, or superstitions; which often proceed from the instincts of a common human nature; and even for practices apparently the most anomalous the author finds parallels elsewhere. He pursues his search for definite conclusions, through the complexity of his accumulated facts and illustrations, with untiring patience; and his opinions have this claim to deference, if no other, that they are the result of painful and protracted study. They are liable, however, to whatever diminution of weight is due to the mistakes and misrepresentations of the authorities on whom he relies; a source of error to which such a compilation of miscellaneous evidence is peculiarly exposed.

In his chapter on the complexion and appearance of the American Indians, after rejecting, for reasons shown, the term *copper colored* applied to the Americans, as not being either correct or distinctive, and adopting that of *brown* as more generally accurate, he finds described by different writers, three classes of complexion among the aborigines, viz: white, brown, and black; not to mention the intermediate shades. The existence of a white class is supported by extracts from the journals of travellers who profess to have observed in certain tribes the complexional characteristics of the races to which that term is usually applied—red and white cheeks, a fair skin, and varied shades of color in the hair, some chestnut, some auburn, some flaxen, as well as some black and curling. The Mandans and Gros-ventres of the United States, the Guayanas of Brazil and Paraguay, the Eskimaux, and the Greenlanders, are adduced as instances of this peculiarity. The light complexion of the Eskimaux led Dr. Robertson to conjecture that they were descendants of the Norwegian discoverers. Captain Lyon and Captain Parry had remarked that their skins, when washed, and such portions as were kept covered by clothing, were clear and transparent, and not darker than that of the natives of southern Europe. Captain Dixon is still more explicit in his statement to that effect; and La Peyrouse, Marchand, Cook, and sundry others whom he mentions, testify to the whiteness of the children at their birth. Baron Humboldt, the Abbe Molina, Herrera, Dobrizhoffer, &c. &c., are quoted as authorities for the existence of tribes in South America that may more probably be called white than copper colored or brown.

Dr. McCulloh's opinion, that aboriginal *blacks or negroes* had been found on this continent, was grounded on the statements of Torquemada, La Peyrouse, and Langsdorf, that some tribes of Indians in California were black, and, as asserted by

the latter, with "large projecting lips, and broad, flat negro noses;" and upon Peter Martyr's account of Balboa's journey across the Isthmus of Darien, where, it is said, "There is a region, not above two days' journey from Qnarequa, in which they found only blackamoors, &c." Stevenson's Travels in South America, and Jnarros' History of Guatemala, are quoted as confirming this story by collateral evidence.

If the country had been as thoroughly explored when Dr. McCulloh wrote as it has been since, he would hardly have considered the admitted diversity of shades of complexion as justifying so distinct a classification as he has adopted.¹

At the close of his chapter on the "social and moral institutions of the barbarous tribes," his views of their traditions are thus expressed:—

"The ancient histories of the migrations of the barbarous tribes are equally confused with those they relate concerning their origin, and in no instance can be presumed to extend back beyond a century of years anterior to the immediate inquiries of the Europeans.

"After a deliberate examination of their respective traditions of emigration, I cannot consider them as throwing the least degree of light upon the history of their origin. They certainly only relate to the partial removals or emigrations of these people from one to another part of the American continent. This belief is in strict conformity with everything we know of their actual condition when we first became acquainted with them. They were continually engaged in war with each other, and, according as they were fortunate or unsuccessful, they either enlarged their country, or abandoned it, to be incorporated with another people.

"Every change of political circumstances, therefore, altered the limits of an Indian territory; which would, in the course of a single century, leave but an indistinct impression on their minds as to any former country from which they may have emigrated. A vague idea of a previous removal might be retained by their oldest people, which they might state to be from some particular point of the compass; but beyond this they seem to have retained no precise information."

As native traditions have not been without their believers, and are blended with the progress of information and opinion, it may be well, before leaving the subject, to illustrate them further.

In a manuscript history of the western country, by Rev. John P. Campbell, of Chillicothe, who died near the close of 1814, it is said:—

"Mr. Thomas Bodley was informed by Indians of different tribes northwest of the Ohio, that they had understood from their old men, and that it had been a tradition among their several nations, that Kentucky had been settled by *whites*, and that they had been exterminated by war. They were of opinion that the old fortifications, now to be seen in Kentucky and Ohio, were the productions of those *white inhabitants*. Wappockanitta, a Shawnee chief, near a hundred and twenty years old, living on the Anglaze river, confirmed the above tradition.

"An old Indian, in conversation with Col. James F. Moore, of Kentucky,

¹ See Dr. Morton's remarks on the complexion of the American Indians, in Schoolcraft's History, Condition, and Prospects of Am. Indians, II, 320.

informed him that the western country, and particularly Kentucky, had once been inhabited by white people, but that they were exterminated by the Indians; that the last battle was fought at the falls of the Ohio; and that the Indians succeeded in driving the aborigines into a small island below the rapids, where the whole of them were cut to pieces. He said it was an undoubted fact, handed down by tradition, and that the Colonel would have ocular proof of it when the waters of the Ohio became low. This was found to be correct on examining Sandy Island, when the river had fallen, as a multitude of bones were discovered.

"Col. Joseph Daviess, when in St. Louis, in 1800, saw the remains of an ancient tribe of the Sacs, who expressed some astonishment that any person should live in Kentucky. They said the country had been the scene of much bloodshed, and was filled with the manes of its butchered inhabitants. They stated, also, that the people who inhabited this country were *white*, and possessed such arts as were unknown by the Indians.

"Col. McKee, who commanded on the Kenhawa when Cornstalk was inhumanly murdered, had frequent conversations with that chief, respecting the people who constructed the ancient forts. He stated that it was a current and assured tradition, that Ohio and Kentucky had been once settled by white people. That, after many sanguinary contests, they were exterminated. Col. M. asked him if he could tell who made those old forts, which displayed so much skill in fortifying. He answered that he did not know, but that a story had been handed down from a *very long ago people*, that there had been a nation of white people inhabiting the country, who made the graves and forts."

In the Portfolio, of June, 1816, from which the above extracts are taken, it is said that the MSS. of Rev. Dr. Campbell had been placed in the hands of a friend of the family to be prepared for publication. It is believed, however, that they were never printed. The *white men* spoken of, in the traditions recorded by the author, may possibly have been the early Spanish and French adventurers; the want of conformity to facts, in regard to events and localities, being explained by the usual absence of consistency in the legendary tales of the natives.

The Kaskaskia chief, Baptist Ducoign, told Gen. George Rogers Clark, that the works on the Kaskaskia river were the palaces and fortifications of his forefathers "when they covered the whole country and had large towns."¹

The traditions related by Cusic, an educated Tuscarora, in his Ancient History of the Six Nations, may be compared with the statement of the Iroquois to the missionary Kirkland, that the defensive inclosures of New York were erected in their wars with the southern and western Indians, three, four, or five centuries ago. Cusic refers to the mounds and fortifications of the west, as the works of ancient southern and western tribes, who had penetrated and occupied the country nearly to the banks of Lake Erie. They were, he says, opposed by the northern tribes, who were more skilled in the use of bows and arrows; and after long and bloody wars, which are conjectured to have lasted for centuries, the Algonco-Iro-

¹ Schoolcraft's Cond. and Prosp. of Am. Indians, IV, 135.

quois confederacy of the tribes prevailed. The towns and forts in the Mississippi valley fell before these conquering tribes, and were left in ruins.

Mr. Gallatin says: "The evidently fabulous annals of the Iroquois were invented by a pure Indian (Cusic). They (the Indians) have no scruple in telling what are called white fibs. If any inquiry is made on any subject, they have considerable tact in discovering the answer which would please the inquirer, and immediately invent a tale for that purpose. I have traced some, evidently of that character, in reference to the supposed Welsh Indians. Yet some of the traditions may be founded on a true fact, though altered, as is so generally the case, in order to answer some immediate purpose. Thus, the assertion of the Delawares that they came from beyond the Mississippi has been confirmed by the affinities of their language with that of the Black Feet. But the story of their having come with the Iroquois, and the recital of their subsequent relations, have evidently been invented."¹

In his chapter on the Natchez and other Indians of Florida, Dr. McCulloh regards the evidence as conclusive that those tribes were competent to the erection of all the earthworks found in that region; as they are known to have constructed similar ones, and to have had customs that indicate their use.

It has been remarked already, that in the accounts of early Spanish and French occupation of the country, no notice is taken of mounds or parapets, except such as were then formed or used by the natives. By reference to *Smithsonian Contributions*, Vol. I, Ch. IV, it will be seen that the characteristic monuments of Florida and Louisiana are pyramidal elevations, often of large horizontal dimensions, but not lofty in proportion, with a flat surface at the top, and a graded way of easy ascent on one side. These are sometimes surrounded, at a little distance, by ditches or parapets.

Now, it happens, that Garcilazo de la Vega, in his history of Florida, describes the formation and purpose of such structures, with a particularity that seems to admit of no misapprehension.

"The town and house of the Cacique of Osachile are similar to those of all other caciques in Florida, and, therefore, it seems best to give one description that will apply generally to all the capitals, and all the houses of the chiefs in Florida. I say, then, that the Indians endeavor to place their towns upon elevated places; but because such situations are rare in Florida, or that they find a difficulty in procuring suitable materials for building, they raise eminences in this manner. They choose a place to which they bring a quantity of earth, which they elevate into a kind of platform two or three pikes in height (from eighteen to twenty-five feet), of which the flat top is capable of holding ten or twelve, fifteen or twenty houses, to lodge the cacique, his family, and suite. They trace around the foot of this mound a square place, conformable to the extent of the town they intend to build, and around this square the more considerable people erect their dwellings. The commonalty build around them in the same manner, and the whole population thus surround their chief. The mound upon which the cacique lives has its sides made

¹ *Trans. of Am. Ethnol. Soc.*, II, cxlvii.

so steep that it is impossible to ascend it but by the artificial steps or way that is fixed alone on one side."

From this and other notices, less particular but equally distinct, of mounds as the sites of temples, and as fortresses, and of fortified inclosures, found in the early narratives as well as from the arts, religious system, and despotic government of those tribes, and from all we know of their history, Dr. McCulloh felt himself justified in maintaining that they and their ancestors were the authors of all the works whose remains exist in that portion of the country. He inferred, too, "that other tribes, also of a certain degree of civilization, inhabited the shores of the Mississippi and Ohio, even up to Pennsylvania, who were fully able to construct any monument hitherto discovered north of Mexico." These he supposed might have been exterminated by the barbarian nations around them, or compelled to migrate elsewhere, perhaps pressed down towards Florida, where they were incorporated with a people of congenial disposition.

He might have added to his references what Ribault says of the great chieftain Chiquola. "They (the Floridians) gave me to understand that they would bring me to see the greatest lord of this country, which they called Chiquola, which exceeded them in height (as they told me) a good foot and a half. They said unto me that he dwelt within the land, in a very large place, and *inclosed exceeding high*, but I could not learn wherewith. * * * I began then to show them all the parts of the heaven, to the intent to learn in which quarter they (Chiquola's people) dwelt. And straightway one of them stretching out his hand showed me that they dwelt towards the north. * * * Besides this proof, those which were left in the first voyage have certified me, that the Indians showed them by evident signs, that further within the land, toward the north, there was a great inclosure or city where Chiquola dwelt."¹

Dr. McCulloh's conclusions respecting the mounds and fortifications of North America may be embraced in a few sentences.

He was decidedly of opinion, in opposition to the views held by him at the commencement of his researches, that they were erected by Indian tribes; the more eminent monuments, probably by nations kindred with the Natches, Toensas, Mobilians, &c., if not by the ancestors of those very people, whose traditions point to some ancient establishments in the western country.

The fortifications, as they were usually termed, he regarded as simple walls, which surrounded towns and villages, including also cultivated grounds, thrown up for protection against surprisals, but without reference to any general system of military defence. The mounds within the inclosures he considered as sites for the dwellings of the chiefs, for council halls, or for temples, the conical mounds being generally for sepulchral purposes.

He thought he had been able to show that, on opening the mounds, nothing had been discovered indicating a state of civilization materially different from that of ordinary Indian society; and certainly nothing surpassing the demi-civilization of

¹ Ribault's account of Florida, in Hakluyt, III, 376.

the Florida Indians. All articles of a higher order of manufacture, said to have been occasionally met with, he believed to have been derived from the early Spanish or French adventurers, or from other external sources.

Although Dr. McCulloh's deductions are usually sensible and discriminating, the plan of his work is open to serious objections. It may serve for a dictionary of reference, but as a method of reasoning it is unsound and deceptive. Detached quotations need not of necessity mislead the compiler, provided he carefully studies the connection in which they are found, but they are liable to have in their separate position, or when combined with other extracts, a force and signification their authors by no means intended. They can never be admitted as evidence, or made the basis of a solid judgment, without a knowledge of the circumstances in which they were written. Dr. McCulloh's work has this great merit and interest: It contains the first clear and definite statement, upon evidence, of opinions that have since been adopted by some of the latest and most influential writers. Dr. Morton employs the term *brown*, suggested by him, to express the general color of the Indians, recognizing also the various shades of complexion which Dr. McCulloh has described, without, however, regarding them as indicative of distinctions of race. Mr. Schoolcraft confirms his views respecting the southern origin of the mound-builders, and the probable history of those remains, and apparently concurs with the general conclusions of his research.¹

It is time to notice more particularly a department of research, thus far but indirectly referred to, which is destined to exert a prominent, if not decisive influence, upon archæological questions.

An examination of American languages, as a means of determining from what branch of the human family the original inhabitants of the country were descended, was suggested at an early period. Efforts have never been wanting, since vocabularies began to be collected, to trace affinities with the languages of the Old World, through words having a similarity of sound and signification; yet, although many striking cases of apparent resemblance between single words of various Indian dialects and those of parallel import in other tongues were detected, philological inquiries produced no satisfactory fruits, because the proper principle on which they should be conducted was not understood.

When Psammeticus, king of Egypt, caused two children to be brought up without an opportunity of hearing speech, in order, by the first words they should utter, to settle a dispute between the Egyptians and Phrygians, as to which was the most ancient language, he acted under the same philosophical misapprehension. The first word spoken happened to be *beccos*; and the Phrygians claimed the victory, because *beccos* in their tongue signified *bread*.

If Psammeticus had prolonged his experiment until the children sought to communicate their ideas to one another, and, after having given names to things, endeavored to combine and modify them to express relation, quality, and action, he might, perhaps, have ascertained in what manner the human mind, governed solely by instinctive impulses, would proceed to the construction of language.

¹ Hist. Cond. and Prosp. of the Ind. Tribes, II, 84 and 320. Ib., IV, 115.

It is in the forms of grammatical structure, the modes of associating and expressing ideas, without regard to the meaning of particular words, that modern philologists have found the true key to the origin and connection of the varieties of human speech.

This is claimed to be a discovery so newly made as to be known and practised on only by scholars of the present generation. It is to Frederic Schlegel that Chevalier Bunsen attributes the establishment of this principle, and so recently as 1808.¹ It is relied upon to solve the question of the relative antiquity of nations, and to elucidate some of the mysteries connected with the descent and distribution of races. The proposition is, simply, that names of things, and terms of expression, are transitory, and in the course of time may be wholly replaced by others; but the system of grammatical construction is permanent, assimilating to itself, and distributing, according to its own laws, whatever new material is acquired; and, unless overwhelmed by the irruption of a new system, sustained by the dominating force of numbers and conquest, maintains its vitality through all changes.

As applied to American languages, the results of this rule of exegesis have been most remarkable. No theories of derivation from the Old World have stood the test of its alchemy. All traces of the fugitive tribes of Israel supposed to be found here, are again lost.² Neither Phœnicians, nor Hindoos, nor Chinese, nor Scandinavians, nor Welsh, have left an impress of their national syntax behind them. But the dialects of the Western Continent, radically united among themselves, and radically distinguished from all others, stand in hoary brotherhood by the side of the most ancient vocal systems of the human race. "It deserves notice," says Mr. Gallatin, "that Vater could point out but two languages that, on account of the multiplicity of their forms, had a character, if not similar, at least analogous to those of America. These were the Congo and the Basque. The first spoken by a barbarous nation of Africa, the other now universally admitted to be a remarkable relic of a most ancient and primitive language found in the most early ages of the world."³

The science of comparative philology is yet in its infancy, and investigators are constantly pointing out new analogies, and as often invalidating those which had before been suggested. The subject is one of great complication and difficulty; and it is not always easy to draw the line of distinction between resemblances incident to the attributes of a common human nature, and affinities upon points of structure that constitute the original and peculiar genius of a language. With whatever primordial forms of speech the American languages may be associated by different writers (and on this point they are by no means agreed), their primitive unity and long separation from those of other countries seem to be generally admitted.

There are three epochs in the progress of information respecting the languages

¹ Bunsen's "Outlines of the Philosophy of Universal History, applied to language and religion." Lond., 1854, I, 50.

² The essential diversity between the Indian languages and the Hebrew, is learnedly exhibited in the Discourse of Rev. Dr. Jarvis before the N. Y. Hist. Soc. in 1819, on the Religion of the Indian tribes.

³ Trans. of Am. Antiquarian Soc., II, 203.

of America. In the first, the study of words was the principal object of attention, for the purpose of detecting similarities of sound and sense with those of other nations. In the second, the radical connection subsisting between the native dialects of the whole continent excited the special interest of inquirers. In the third, the modern linguistic system was adopted, and the philosophy of organization, the grammatical machinery by which ideas are combined, and quality, relation, and action, are indicated, became the prominent subject of investigation.

Vocabularies were not collected at first with a view to comparison, but to facilitate communication with the natives. Tables of Mexican words with a Spanish translation were printed in Mexico as early as 1571; and there are few early travellers and missionaries who did not preserve similar specimens in their journals, from the different regions they visited.

When terms and phrases were analyzed for grammatical purposes, the object was still limited to the convenience of intercourse, or the conveyance of religious instruction. Roger Williams, who preceded Eliot in this kind of labor, prepared his "key," "as a help to the language of the natives;"¹ and Eliot's "Grammar begun,"² was "for the help of such as desired to learn, and for the furtherance of the gospel among the Indians." Father Rasle's copious MS. dictionary, commenced in 1690, had no other design. The same may be said of Josiah Cotton's Vocabulary, compiled in 1707-8.

It is not until the treatise of Jonathon Edwards appeared, in 1788, that we find the recognition of a different purpose; and in this the same principles of investigation are declared and practised that have given to Schlegel the reputation of establishing a new school of comparative philology.³ The title of Dr. Edwards's tract deserves to be inserted at length, as significant of the nature and scope of a plan which he suggested and illustrated, but did not attempt to execute upon any extensive scale.⁴ The principal merit of Edwards undoubtedly consists in the detection of a prevailing identity of language among tribes widely separated, and employing words apparently dissimilar.

Although not fully aware, it may be, of the ethnological importance of a study of the mechanism of language, it must have always been regarded with interest by men of philosophical minds. Maupertuis, the celebrated mathematician, in his "Reflections on the origin of language," first printed about 1750, recommended the study of barbarous languages, "because we may chance to find some that are

¹ Printed in 1643.

² Printed in 1666.

³ Schlegel's Essay is thus referred to by Bunsen: "In 1808 a book appeared, small in extent, and on the whole a mere sketch, but possessing all those properties which constitute an *epoch-making* work. I mean Schlegel's Essay on the language and philosophy of the Hindoos. It fully established the decisive importance and precedence which grammatical forms ought to have over single words in proving the affinities of languages. To the impulse given by Schlegel's work we are indebted in a high degree, for the ideas on which the new linguistic school of Germany has proceeded." *Phil. of Universal Hist.*, I, 50.

⁴ "Observations on the language of the Muhhekaneew Indians. In which the extent of that language in North America is shown; its genius is grammatically traced; some of its peculiarities, and some instances of analogy between that and the Hebrew, are pointed out."

formed on *new plans of ideas*." His contemporary, Turgot, professed not to understand what was meant by "plans of ideas;" but he was then a youth, a little over twenty years of age, and aiming to write a smart criticism on the essay of Maupertuis.

Jefferson's remarks in his Notes on Virginia, Quere IX, contain the idea that Schlegel subsequently made productive. "Were vocabularies formed of all the languages spoken in North and South America, with the *inflections of their nouns and verbs, their principles of regimen and concord*, it would furnish opportunities to those skilled in the languages of the Old World to compare them with these, and hence to construct the best evidence of the derivation of this part of the human race."¹

The labors of Dr. Barton are entitled to the highest praise; but they were in a path which had been travelled before. His comparisons related almost exclusively to words, their sense, and etymology, and did not penetrate to the vital principle that controls their regimen, as the vital principle of a plant determines the form of its growth. Pursuing the same line of investigation, he advanced further than his predecessors, and having, with great patience and industry, accumulated a larger stock of materials, he very much extended the field of inquiry.

As early as 1708, Adrian Reland, distinguished as an oriental scholar and a philological writer, published, at Utrecht, a dissertation on the languages of America. The dialects he had examined were, as enumerated by him, the Brazilian, the Peruvian, the Chilian, the Poconchi or Pocoman, the Carib, the Mexican, the Virginian, the Algonkin, and the Huron. That which he called the "Virginian" was the language of Eliot's Bible and Grammar, and his specimens of the Algonkin and the Huron were derived from the vocabularies of Baron de la Hontan. He states, as the result of his observations, that, while most of the languages of Europe, Asia, and Africa, can easily be traced to their origin, it is very different with those of America; as, on comparing the latter with others, it is almost impossible to discover sufficient resemblance to excite even a suspicion of what people took possession of this vast continent. Yet, supposing that the New World must have received its population from the Old, he seeks an explanation for the radical changes of speech in the known fact, that the priests and chiefs of some tribes created a language for themselves, purposely unintelligible to the lower orders, which, from being exclusively a court language, might gradually be communicated to the people, and supersede their own. To this he adds the fluctuating tendency of all speech, in the absence of written symbols to give permanency to sounds. If any relation is to be found between the tongues of the two hemispheres, he thinks it must be looked for among the languages of Asia. He inserts an Icelandic vocabulary, by which, he says, "they who imagine there is any affinity between the languages of the North and those of America may be undeceived." Even Clavigero, the contemporary of Jefferson and Barton, was somewhat in advance of them in express-

¹ It is stated that President Jefferson had himself gathered vocabularies which, at some interval of leisure from public employments, he intended to digest and publish; but in 1801 his MSS. were destroyed by fire, and he had not the heart to commence his work anew. Schoolcraft's Hist. of the Cond. and Prosp. of the Indians, II, 356.

ing the opinion, based upon his own philological researches, that the Americans do not derive their origin from any people now existing in the ancient world.¹

The great names that have given lustre to the modern school of comparative philology are mostly German; and the number of American dialects collected and analyzed by the two Adelungs, Vater, and William Von Humboldt, caused our own distinguished philologists, Duponceau and Pickering, to unite in an expression of astonishment and admiration towards them as their masters in a knowledge of the customs, manners, and languages of the aborigines of this country.²

Frederic Adelung ascribes to the Empress Catharine II, of Russia, the honor of commencing, personally, the solid foundation on which philological science now rests. For her private gratification and amusement, she had formed the plan of procuring vocabularies of all the languages in the world; and directed her Secretary of State to write for that purpose to the powers of Europe, Asia, and Africa. Application was made to President Washington for our Indian languages, and several specimens were furnished. The empress pursued her studies of comparison in solitude for many months; but at length growing tired of this hobby, she sent for Professor Pallas, and "after a full confession" (as she says in a letter to a friend) of the manner in which she had been occupied, it was agreed between them that the translations she had made of a list of Russian words into more than two hundred languages or dialects, should be printed for the benefit of those who were willing to engage in such labors.³

¹ Hist. of Mexico, first printed in 1780.

² Mass. Hist. Col., 2d se., IX, 232.

³ Catherinens der Grossen Verdienste um die Vergleichende Sprachenkunde. Mem. of Am. Acad., IV, 321.

The Russian Empress and Eugene Aram are singular persons to be brought together in this connection; yet they both appear to have entertained views upon philological subjects somewhat in advance of their contemporaries. The following note, received through Professor Henry, from Col. C. A. Alexander, of Washington, will be found to possess more than a merely scientific interest. It will increase the regret that the eminent abilities of Aram could not have been employed in pursuits that might have proved honorable to himself, and useful to mankind.

"In any work treating of the affinities of language, it would seem to be unjust to overlook the claims of the remarkable but unfortunate *Eugene Aram*, to be considered as an early (if not the earliest) cultivator of this branch of philological science, upon the right principle, and with anything like an adequate comprehensiveness of purpose. Some account of his labors may be found in the *Annual Register* (Dodsley's) for 1759, page 360, where we are told that having discovered a surprising affinity throughout the Latin, Greek, Hebrew, French, Chaldee, Arabic, and Celtic languages, 'he resolved to make a Comparative Lexicon, and, at the time of his trial and death, had collected for that purpose above one thousand notes.' He had observed that all previous lexicographers had limited their views to tracing such accidental derivations as might have sprung from commerce or occasional intercourse, without adverting to the radical affiliation which a more profound inquiry discloses. 'Yet,' as he well remarks, 'it is not to be thought of, much less concluded, that the multitude of English words which are certainly of Latin, Greek, and Phœnician origin, are all the relics of the Roman settlements in Britain, or the effects of Greek or Phœnician commerce; on the contrary, the resemblance was coeval with the primary inhabitants of the island. How nearly related is the Cambrian, how nearly the Irish, in numberless instances, to the Latin, the Greek, and even the Hebrew, and both possessed this similarity long ago, before Julius Cæsar and the Roman invasion. I know not but the Latin differed more from itself in the succession of six continued centuries, than the Welsh and Irish at this time

From Pallas to the compilers of the "Mithridates" the transmission of the design of the empress is direct. That great work, commenced by Professor John Christopher Adelung, and continued by Professor Vater, the Hon. Frederic Adelung, and Baron William Von Humboldt, was published at Berlin, gradually, from 1806 to 1817. Two volumes, containing together no less than eight hundred and seventy-four pages, are exclusively dedicated to the languages of the Indians of North and South America, and were written almost wholly by Professor Vater.

We are, without question, indebted to the fruits of the labors of those learned men, for the active proceedings of the Historical Committee of the American Philosophical Society, in 1816.

In that year, Mr. Duponceau commenced a correspondence with Mr. Heckewelder, the object of which was "to ascertain the structure and grammatical forms of the languages of the aboriginal nations of America."

To facilitate this investigation, the library of the society was enriched with a collection of valuable MS. dictionaries, grammars, and vocabularies, prepared by the Moravian missionaries, a series of vocabularies presented by Mr. Jefferson, and various tables obtained from different quarters. Thus, in addition to the resources provided by professor Vater, the society had become possessed of new materials of an important character, with the advantage of having at hand an experienced interpreter, able, from personal knowledge, or by correspondence with his brethren at different missionary stations, to supply the most exact and pertinent information.¹

The duty of the Historical Committee, begun by Dr. Wistar and Mr. Duponceau, was continued by the latter alone, in consequence of Dr. Wistar's death; and the results were published in 1819, in connection with Mr. Heckewelder's "Historical Account of the Indian Nations." Their report describes the peculiar characteristics of the American languages, thus: "We find a *new* manner of compounding words from various roots so as to strike the mind at once with a whole mass of ideas; a *new* manner of expressing the cases of substantives by inflecting the verbs that govern them; a *new* number (the particular plural), applied to the declension of nouns and conjugation of verbs; a *new* concordance in tense of the conjunction with the verb; we see not only pronouns, as in the Hebrew and some other languages, but adjectives, conjunctions, adverbs, combined with the principal part of speech, and producing an immense variety of verbal forms. When we consider

from the Latin. We find pure Greek in the Peak (of Derbyshire) itself, whither foreigners can scarcely be supposed to have come, there having been but few invitations to it twice ten centuries ago, and perhaps not many now.'

"In the work quoted from, an example of his method is given in the word 'beagles,' which he traces from its Celtic root, *pig*, *id est*, *little*—through the Greek (*πυγμαίος*, *i. e.*, a dwarf), the Irish (*beaglach*, *i. e.*, little fearing, &c.), the Scotch (philibig, *i. e.*, a little petticoat), as well as in several English provincialisms. Thus, *beagle* is not only a *little* dog, but also a *cowslip*, from the littleness of its flowers, and the appellation *Peggy*, is properly applicable to no female as a Christian name, but is merely an epithet of size, and a word of endearment only."

¹ The Moravians had paid great attention to Indian lexicography. Zeisberger prepared a dictionary and grammar of the Irōquois, and a copious vocabulary and grammar of the Delaware language; Pylens, a collection of Iroquois words and phrases, grammatically arranged; and Schultz; a dictionary and grammar of the Aruwaek language.

these and many other singularities, which so eminently characterize the American idioms, we naturally ask ourselves the question: Are languages formed on this model to be found in any other part of the earth?"

Mr. Duponceau gives the following summary of the products of philological research at that period, in his notes on Eliot's Grammar, printed by the Massachusetts Historical Society, in 1822.

"Before I proceed to the language of the Massachusetts Indians, I may be permitted to show what fruits have been derived from our science, since it has begun to be considered an interesting object of study.

"By the labors of the illustrious Adelung, a census, as it were, has been taken of all the languages and dialects (that are known to us) existing on the surface of the earth; they have been all registered and enumerated, and it is now ascertained, as nearly as possible, that their aggregage number amounts to 3,064; of which Africa has 276; Europe, 587; Asia, 987; and America, 1214—being more than Asia and Africa together, and nearly as many as the whole of the old continent, Africa excepted."

"It is ascertained, at least nothing has yet appeared to the contrary, that the languages of our American Indians are rich in words and grammatical forms; that they are adequate to the expression of even abstract ideas; and that they have a mode (different from our own), by which they can easily combine their radical sounds with each other, so as to frame new words whenever they stand in need of them. What is still more extraordinary, the model of these languages has been found to be the same from north to south; varieties being only observed in some of the details, which do not affect the similarity of the general system; while, on the eastern continent, languages are found, which, in their grammatical organization, have no relation whatever with each other. And yet our American idioms, except where they can be traced to a common stock, differ so much in point of *etymology*, that no affinity whatever has been yet discovered between them."

"It has been, moreover, ascertained, that one nation at least, on the eastern continent of Asia, the *Sedentary Tschuktschi*, speak an *American* language (a dialect of the Eskimaux). On the other hand, no nation has yet been discovered on this continent that speaks an Asiatic language."

"It has been also ascertained that from the peninsula of Malacca, in Asia, to the Cocos Island, and through the various clusters in the South Sea, and also in the island of Madagascar, dialects of the same language (the Malay) are spoken. No traces of this language have been yet discovered on the coast of the American continent; but they may appear on further research."

One of the greatest obstacles to a successful and satisfactory comparison of Indian vocabularies, was caused by the capricious and ever varying orthography adopted by writers of different nations. The elementary sounds were often so variously represented that the same word could not be recognized in the dissimilar combinations of letters employed to express it. Thus, for example, if the letter *j* was used by an Englishman, to a German or Italian it would represent the sound of our *y*; to a Frenchman or Portuguese, that of *zh* or *s* in pleasure; while a Spaniard would give it the strong guttural accent of his country. As the tables of words were collected

by persons of all these different nations, it is evident that they could not be compared, with any reasonable expectation of determining their affinities, without a careful reduction to some common standard of orthography. Dr. Barton attempted it in his own researches; other philologists were less careful; and even Vater was led into many mistakes arising from this difficulty.

The investigations of the Committee of the Philosophical Society were no sooner published than they excited a deep interest in that able scholar and lexicographer, Mr. John Pickering, of Massachusetts, and led him to prepare a treatise on the orthography of the Indian languages of North America, with a view to obviating the embarrassments that had been experienced. This was printed by the American Academy, in the 4th volume of its *Memoirs*.¹ Becoming more engaged in the subject, Mr. Pickering wrote a valuable introduction to Eliot's *Grammar*, republished by the Massachusetts Historical Society in 1822, with elaborate notes by Mr. Duponceau; and, the year following, prepared his edition and extension of the work of Dr. Edwards, which was printed by the same Society. The able and learned article on Indian languages, in the appendix to the sixth volume of the *Encyclopædia Americana*, was also written by him.

In that article, Mr. Pickering refers to Mr. Duponceau as "the first to discover and make known to the world the remarkable character which pervades the aboriginal languages of America from Greenland to Cape Horn," and states that it is from his writings we derive nearly all that is known of the general characteristics of those dialects, while his theory has been confirmed by all subsequent observations.

Mr. Duponceau attributed the origin of his own interest in this subject to his undertaking a translation of Zeisberger's *Delaware Grammar* on behalf of the Committee of the Philosophical Society, and to his correspondence with Heckewelder, of whom he always spoke in terms of the highest respect and regard. He continued to promote inquiry by various contributions to the transactions of the Philosophical Society, and crowned his labors in this department of science by his elaborate memoir on the grammatical system of the languages of the North American Indians, to which the Royal Institute of France awarded the prize founded by Volney for the encouragement of philological studies.² That work was published by the Royal Institute, in 1838, and constitutes a volume of four hundred and sixty-four pages, embodying the substance of the author's information scientifically arranged, and the views that had resulted from his investigations. These views differ from those already presented in a single particular. An apparent exception to the rule of uniformity in the structure of the American languages was pointed out to Mr. Duponceau by Don Manuel Najera, a Mexican. This was in the case of the Otomis, a rude tribe of central Mexico, whose language is monosyllabic, like the Chinese. Najera demonstrated that peculiarity in a Latin treatise,

¹ Mr. Pickering's system of orthography was adopted by the American Board of Commissioners for Foreign Missions, and has been used in their numerous publications.

² "Mémoire sur le système grammatical des langues de quelques nations Indiennes de l'Amérique du Nord."

in the fifth volume of the new series of the transactions of the American Philosophical Society.¹ The fact was not made known to Mr. Duponceau until his memoir was in the possession of the French Institute, and is first mentioned in the preface attached to it when printed, accompanied with the reflection that "in science, especially in metaphysical science, it is not well to be in haste to generalize."²

When Mr. Gallatin prepared his "Notes on the semi-civilized nations of Mexico, Yucatan, and Central America," in 1845, he examined Najera's treatise with a good deal of care. Some exceptions or objections were found to his theory, and some affinities to other dialects were detected, yet the theory appeared to him to be substantially correct; and he drew from thence a moral similar to that of Mr. Duponceau. "The distinct character of the Otomi, teaches us we must be cautious in drawing too general conclusions. It appears certain that almost all the Indian languages are similar in their grammatical forms, structure, and general character. But it does not follow that there are no exceptions."

Mr. Gallatin commenced his labors in this field of inquiry, in 1823, with an attempt to classify the Indian tribes of North America in families according to their respective languages, at the request of his friend Baron Alexander Von Humboldt. That essay having been communicated by Humboldt to M. Balbi, was noticed by the latter in the Introduction to his "Atlas Ethnographique," and there attracted the attention of the American Antiquarian Society, whose officers applied to Mr. Gallatin for a copy. As he had kept none, but had collected many additional materials, the essay was re-written and much enlarged, and occupies the greater part of the second volume of "Archæologia Americana," published in 1836.

The synopsis was originally intended to embrace all the tribes north of the semi-civilized nations of Mexico; but the want of materials confined the inquiry towards the south to the territory of the United States. Within that territory, east of the Rocky Mountains, nearly all the dialects were ascertained, as well as most of the *families* of languages north of the United States.

Mr. Gallatin's general conclusions were not dissimilar to those of Mr. Duponceau. Being less imaginative, and less under the influence of excitement produced by the development of unexpected and extraordinary characteristics in the American languages, he employed a cooler and stricter logic in their examination. He had the advantage also of a wider scope, and a field of observation prepared, to a considerable extent, by previous labors. Hence, his view is more comprehensive, and his exposition of details more complete.

His own account of the result is that "it appears to confirm the opinions already entertained on that subject by Mr. Duponceau, Mr. Pickering, and others; and to prove that all the languages, not only of our own Indians, but of the natives of America from the Arctic Ocean to Cape Horn, have, as far as they have been investigated, a distinct character, common to all, and apparently differing from any of those of the other continent with which we are most familiar."

¹ In the title to that treatise, the name is written Naxera; but the author usually employed the other form of Najera, the sound in Spanish being the same in either case.

² Dans les sciences, et surtout dans les sciences métaphysiques, il ne faut pas se hâter de généraliser.

"Those of America seem to me to bear the impress of primitive languages—to have assumed their form from natural causes, and to afford no proof of their being derived from a nation in a more advanced state of civilization than our Indians. Whilst the unity of structure, and of grammatical forms, proves a common origin, it may be inferred from this, combined with the great diversity, and entire difference in the words of the several languages of America, that this continent received its first inhabitants at a very remote epoch, probably not much posterior to that of the dispersion of mankind."

"I rather incline to the opinion, that the civilization of Mexico, and some portions of South America, grew out of natural causes, and is entirely of American origin."¹

While declaring that the languages of America attest the antiquity of its population, Mr. Gallatin is careful not to be understood as expressing views "inconsistent with the opinion of an Asiatic origin, and with the received chronology."

"Assuming the central parts of Asia to have been the cradle of mankind, since three couples would, in thirty periods of duplication, increase to more than six thousand millions of souls, we may fairly infer, not only the possibility, but even the probability, that America began to be inhabited only five or six hundred years later than the other hemisphere."

"On the probable supposition, that the whole continent of America was inhabited one thousand years after the flood, or near four thousand years ago, the faculties of man, gradually unfolded and improved, may, in the course of so long a period, have produced, without any extraneous aid, that more advanced state of society and knowledge, which existed in some parts of America when first discovered by the Europeans."

In regard to the monuments of the United States, he remarks: "It is not necessary to refute the opinion of those who would ascribe these works to European emigrants. There is nothing in them which may not have been performed by a savage people. The Scandinavian colony of Vinland is out of the question. The Norwegians might, indeed, have penetrated through the Straits of Bellisle to the St. Lawrence; but, if not destroyed by the savages, a considerable time must have elapsed before they could, in their subsequent progress, have reached the Mississippi and ascended its western tributaries. The well ascertained age of trees growing on those ramparts in the lower part of the valley of the Ohio, proves that some of those works were erected before the thirteenth century; and we know that the insignificant colony of Vinland had not left its original seats in 1120. Ignorant as we are, and shall ever remain, of the internal revolutions which may have formerly taken place among the uncivilized tribes of North America, it is not probable we can ever know by whom the works in question were erected."

In 1845, Mr. Gallatin communicated to the American Ethnological Society his "Notes on the semi-civilized nations of Mexico."

In that valuable paper he not only extended his philological comparisons to the languages of those nations, but reviewed their history and chronology, and their

¹ Prefatory letter.

astronomical system ; devoting a chapter to conjectures on the origin of American civilization.

After the lapse of nine years from the period of his first publication his opinions were not materially changed. Referring to his previous essay, he says : " Taking into view the words or vocabularies alone, although seventy-three tribes were found speaking dialects so far differing, that they could not be understood without an interpreter by the Indians of other tribes ; yet the affinities between the words of many of them were such, as to show clearly that they belonged to the same stock.

Sixty-one dialects, spoken by as many tribes, were thus found to constitute only eight languages, or rather families of languages, so dissimilar, that the few coincidences which might occur in their words appeared to be accidental. But it was, on the other hand, ascertained that all the languages of which partial grammars could be obtained, however dissimilar in their words, were in their structure of the same character."

" As a general result, it appears to me indubitable that, however dissimilar in their words, the grammar proper and general structure of all their languages is, with the exception of the Otomi, founded on the same principles."

His remarks upon the Eskimaux are worthy of particular notice, on account of the contradictory opinions held respecting that people.

" Several writers have taken it for granted that the Eskimaux were a different race from the other Indian nations of America. Their language is eminently polysynthetic, and, in that respect, in its mode of forming other derivative or compounded words, as well as in its grammatical forms, it is perfectly similar to the other Indian languages, and evidently belongs to the same family. The physical type seems to be essentially the same, and no further varied than might be expected from the excessive severity of the climate. There is not in their size a greater difference between them and the Algonkins, than between the Laplanders and the Finns. With respect to their true color, not easily discernible, Captain Clavering, who reached the most northerly inhabited parts of the eastern coast of Greenland, having thoroughly washed a boy, found that he was copper colored."¹

After stating that the most striking points of resemblance between the Americans and the inhabitants of the other hemisphere, refer almost exclusively to Asiatic countries ; and that, as our knowledge of the languages of northeastern Asia is as yet limited, further investigations are necessary before any legitimate inference can be drawn, he says :—

" From whatever quarter America may have been peopled, the first important question is that of the time at which that event must have taken place."

" We find in America more than one hundred languages, which, however similar in structure, differ entirely in their vocabulary, or words. This difference must have originated either before or after America was inhabited. The first supposition implies that of America having been settled, not by a few distinct nations, which is very possible, but by more than one hundred distinct tribes and nations of different origin, and speaking entirely different languages. This supposition, so utterly

¹ See *ante*, p. 48, respecting the supposed color of the Eskimaux.

improbable in itself, is, moreover, inconsistent with the great similarity in their physical type, and the structure of their languages, between almost all the several nations and tribes which inhabited America when discovered in modern times by the Europeans. If, as is highly probable, the prodigious subdivision of languages took place in America, after making every allowance for the greater changes to which unwritten languages are liable, and for the necessary subdivision of nations, in the hunter state, into separate communities, yet, for producing such radical diversity and great multiplication of languages, we want the longest time we are permitted to assume. There is the highest probability that America was inhabited at a date as early as is consistent with the laws which govern the multiplication of the human species, and with the time necessary for the spreading of men to the extreme shores of the other hemisphere."

"I beg leave once more to repeat that, unless we suppose that which we have no right to do, a second miraculous interposition of Providence, in America, the prodigious number of American languages, totally dissimilar in their vocabularies, demonstrates, not only that the first peopling of America took place at the earliest date which we are permitted to assume; but also that the great mass of the existing Indian nations are the descendants of the first emigrants; since we must otherwise suppose that America was peopled by one hundred different tribes, speaking languages totally dissimilar in their words."

After expressing his opinion that, if the articles from the mounds do not afford evidences of a much greater progress in the arts than the Indians had attained when first visited by the Europeans, the monuments themselves are proofs, not only of a more dense, and therefore agricultural population, but also of a different social state, he proceeds to say:—

"As now informed, there is but one leading fact which may aid us in forming any conjecture respecting that extinct race. Their monuments are found exclusively in the valley of the Mississippi, and they are not even seen on the upper or northwestern branches of the Missouri. Not a single one has ever been found either east of the Alleghany, or west of the Rocky Mountains. It seems impossible that, if coming immediately either from Europe or Asia, they should have left no traces whatever of their existence in the regions where they must have landed. There seem to be but two alternatives. Either they were a colony from Mexico; or some of the savage tribes must by conquest, or by some other means unknown to us, have converted themselves into an agricultural nation. The first supposition seems to me the most probable; and, at all events, their agriculture must have been derived from Mexico. In either case, and whatever opinion may be entertained respecting their origin, or their apparent progress in agriculture, it appears that they were not numerous or strong enough to maintain their position; and they must have been ultimately either exterminated or driven away by the savage tribes which surrounded them."

Mr. Gallatin had previously gone into an argument to prove the domestic origin of the astronomical knowledge possessed by Peruvians and Mexicans. He had, also, endeavored to show that the *cereals* of the eastern hemisphere (millet, rice, wheat, rye, barley, oats), were entirely unknown to the Americans; and that maize,

which was the great and almost sole foundation of American agriculture, was exclusively of American origin, indigenous in Mexico and other tropical regions, from whence it spread in different directions.¹

A few years later he had an opportunity to give a degree of completeness to his philological observations, and to mature his views upon the general subject of American archæology. The results of studies continued through a period of more than twenty-five years, are given in his most copious and elaborate introduction to the principal article of the second volume of the Transactions of the Ethnological Society, printed in 1848. The article is entitled "Hale's Indians of Northwest America, and Vocabularies of North America," being composed of ethnological materials collected by Mr. Hale, while attached, in the capacity of Philologist, to the United States exploring expedition of 1838-42.

Mr. Gallatin's Introduction occupies one hundred and sixty-four closely printed 8vo. pages; and, when we reflect that, at the time of its publication, he was eighty-seven years of age, we cannot but be surprised at the clearness of his ideas and the youthful vigor of his style. To any one else, the labor of analysis and comparison involved in his essays, would, at almost any period of life, be fatiguing, however agreeable; but to him it seemed only a source of amusement and recreation. His mind was well adapted by nature to such investigations; the subject was one with which he had become familiar; and his latest efforts indicate no diminution of activity or interest.

In this, his last important work, most of his previous conclusions are repeated, as confirmed by enlarged observation. A table is given of thirty-two distinct families of languages in and north of the United States; but care is taken to explain that this division is made without any reference to their grammar, or structure; "as, however differing in their words, the most striking uniformity in their grammatical forms and structure appears to exist in all the American languages, from Greenland to Cape Horn."

As a fact bearing upon the antiquity of American dialects, which, from an original identity of nomenclature, have by some means become so diversified, it is stated that the tenacity of even unwritten languages has been proved by a multitude of instances; and that those of the same tribes cannot have materially altered during the last three hundred years—the vocabulary taken by Cartier, in the middle of the sixteenth century, being still recognized as belonging to the Iroquois family, while, with the aid of a few words found in the narrative of De Soto's expedition, Mr. Gallatin had been able to trace his march as far west as the Mississippi. Mr.

¹ Dr. Bachman doubts whether the native country of *maize* is positively determined. He says: "We have as yet been unable to find any spot, either in North or South America, where it may be said to be indigenous. In every locality where it has been found, it had been planted by the Indian tribes, and was only preserved from extermination by artificial culture. Linnæus, Willdenow, Pursh, &c., regarded it as a native American production; on the other hand, Crawford, and several other botanists, who travelled extensively in India, have expressed an opinion that it was a native of the warmer parts of Asia."—*Doctrine of the Unity of the Human Race Examined*, &c., p. 281.

Duponceau also made himself intelligible to the Wyandots, with no other assistance than the imperfect vocabulary taken in the year 1625, by the Franciscan Sagard.

In Bradford's "American Antiquities," published five years before, arguments had been brought forward tending to show an affinity between the Polynesian and American languages. Mr. Gallatin's opinions on this point are very decided. He admits that there are some analogies of structure between the two, inviting further investigation, which he proceeds to bestow upon them, but says: "No traces of the Malay language are found in the vocabularies of any of the American languages which have been investigated. On the other hand, all the languages of the Polynesian Islands (not including among these either Australia or the black Papuan race) were at once recognized as belonging to the great Malay family, as soon as vocabularies of their various dialects had been published. The supposition that this language had its origin in Polynesia, and was transferred thence to the Asiatic Islands and Continent, is inadmissible. The fact that the connection between the Polynesian and Malay languages is still so visible, proves that the migrations from Asia, by which Polynesia was colonized, are of a comparatively recent date. If any portion of the Continent of America was ever settled by Malay emigrants, which is extremely improbable, it must have been at a very early and remote period."¹

In 1846, Mr. Gallatin wrote to Mr. Schoolcraft for certain vocabularies that he wished to possess, and in his letter, remarks: "I am preparing for the press—1st, a general, but still very imperfect, view of the grammar or structure of the several languages of the aborigines of America; 2d, a comparative vocabulary of the languages of the tribes within the United States, and north of their northern boundaries."

"As this, if I live long enough to complete it, will be my last contribution to that object, I naturally feel anxious to make it as full, and as useful to those that may succeed me, as possible."²

He mentions that he shall publish the work at his own expense. But, with the exception of such portions as are used in the Introduction to Mr. Hale's essay, it is presumed that the materials were never fully arranged for publication.

No one appears to have caught the mantle of Mr. Gallatin, and sought to fulfil his mission. Many valuable contributions have been added to the means of effecting his purpose; but the purpose itself, the completion of a full and well digested analysis of the American languages, exhibiting their peculiarities, and their affinities with one another, and with those of other parts of the world, has never been accomplished.

We are not unmindful of what Mr. Schoolcraft has written at various periods,

¹ In Dr. Lieber's brief essay on the "Plan of Thought of the American Languages," in the second volume of Mr. Schoolcraft's large work, the author states that, in 1843, he addressed a letter to Mr. Gallatin, calling his attention to certain points of similarity between American idioms and those spoken by the Islanders of the South Pacific Ocean. This had reference apparently to Mr. Bradford's hypothesis that the American red race is of Mongolian origin, and reached this continent by the islands of the Pacific. Mr. Gallatin's observations may, therefore, be regarded as a reply to those gentlemen.

² Schoolcraft's *Hist., &c., of the Indian Tribes*, III, 397.

and collected in his summary of Indian history, in course of publication by the United States Government. His philological treatises contain rich stores of information; but they do not aggregate the materials in a manner to admit of conclusions that are well defined, and at the same time so universal as to be free from important exceptions.

A series of essays upon the languages of the Indians, some of them accompanied with vocabularies, was commenced in the second part of his general history, and has been continued in subsequent volumes; but the facts and views presented are either partial, being derived from an investigation of particular dialects, or, if general, are brief, and by no means intended to be absolute or conclusive. The article entitled "Plan of Thought of the American Languages," by Dr. Lieber, occupies but four pages, and is chiefly devoted to the suggestion and recommendation of a new term for expressing a prominent idiomatic feature.

Mr. Schoolcraft's prolonged and familiar acquaintance with various Indian tribes, and his connection with the race, seem to give him almost unequalled advantages for such investigations, and the fruits of his local studies are of superior importance. It remains to be seen whether the state of his health will permit him to prepare, for a future volume, a comprehensive view of the whole subject, from which may be deduced some formulæ exhibiting, with satisfactory clearness, the principles of organization that constitute the distinctive genius of American speech. The idea is held up, however, throughout his work, that the time has not yet come for that most desirable consummation.

Mr. Gallatin commenced his latest endeavor to point out some striking features common to all the numerous dialects, with the following disclaimer of qualification:

"The process by which languages are gradually formed, and a clear conception of the fundamental principles which distinguish those of America from those of other parts of the world, are subjects beyond my competence. Although I perceive, and am satisfied of, the similarity of character in the structure of all the known American languages, I cannot define with precision the general features common to all. I can only state those which, on a very superficial view of the subject, have struck me as characteristic; and it is with unfeigned diffidence that I submit some general and desultory observations."¹

The peculiarity most frequently mentioned, as characteristic of the Indian idioms, is a tendency to accumulate a multitude of ideas in a single word. This process was called by William Von Humboldt, and by other philologists after him, *agglutination*. Mr. Duponceau preferred the term *polysynthetic*. Dr. Lieber suggested *encapsulated* (which is explained by Mr. Schoolcraft as applicable to those cases that are "clustered or botryoidal, thought exfoliating thought, as capsule within capsule, or box within box"), but endeavored to show that *holophrastic*—from two Greek words, signifying to speak or express the whole—best conveys a correct idea of the principle.²

¹ Trans. of Ethnol. Soc., II, 120.

² "*Coalescence*" is the word employed by Governor Cass. "The power of coalescence, if it may be so termed, possessed by the Indian languages, is one of their most extraordinary features. Words,

The process, in fact, is simply that of condensing a sentence into a single word; it may be by running the several words together, somewhat clipping a portion or all of them; or by using their most emphatic and expressive syllables, and inserting vowels or consonants when required for euphony. The Delaware word "*nadholineen*," is composed of the first syllable of the verb *naten*, to fetch, of the last syllable of the noun *amochol*, a boat, and of *ineen*, a termination giving a personal application to any word or phrase, and corresponding in sense to the English *us*. A free translation of the compound is, "Come and fetch us across the river in a canoe." In the condensed form it becomes a verb, that is conjugated through all the moods and tenses. The third person singular, indicative, is *nadholawall*—"He is fetched over the river in a canoe." In like manner, "*Wunaquim*," an acorn, is formed from *wunipach*, a leaf, *nach*, a hand, and *quim*, a nut. Thus it signifies the nut of a tree whose leaves are in the form of a hand.¹

The Indian seldom makes use of terms that are either abstract or arbitrary. He does not say *a* tree, *a* man, or *a* horse; but the word employed indicates some particular tree, man, or horse, identified by certain qualities or circumstances connected with it, and often by the gender to which it belongs. Thus many ideas are embraced in a name; and a combination of words, or parts of words, suggesting all of them, is required in its construction.

Mr. Gallatin adduces, from the English, such words as "incompatibleness, incommunicableness, congregationalist, &c.," as not differing essentially, either in the number, nature, or arrangement of the elements of which they are composed, from a large portion of the Indian compounded words. But words derived from other languages, with changes to adapt them to English idioms, cannot be regarded as perfect analogies. There is a fine illustration of holophrasm in the perhaps fanciful derivation, that we have somewhere seen, which, from the Latin "*caro data veribus*," deduces *ca-da-ver*, a dead body, or corpse.

The want of general and abstract terms would necessarily give rise to a polysynthetic method of expression, as the characteristics of every object of thought or observation must be included in the term that denotes it. The habit may have

and parts of words, are detached and attached so as to form others, conveying simple or complex ideas, and sometimes without any apparent connection between the new word and its roots."

The above is from an article in the *North American Review* of July, 1828, said to be written by Governor Cass. It is, professedly, a notice of one of Mr. Schoolcraft's publications, and also of a vindication of Heckewelder's Indian History communicated to the Historical Society of Pennsylvania by its President, William Rawle. It is, however, principally devoted to a repetition and justification of the doubts the writer had formerly expressed of the accuracy of Heckewelder's philosophical investigations and knowledge of the Delaware language, and to an exposition of his own views of the idioms of that and other Indian dialects. He differs from Edwards and Duponceau on some points of grammatical construction (perhaps it would be more correct to say, points of grammatical *definition*), but concurs in the general ethnological principle that, except in those elements of universal grammar which are common to all tongues, these languages have no affinity, either in etymology or construction, to any others that are known to us.

¹ These examples are taken from Heckewelder's Illustrations of Delaware Idioms, in his correspondence with Mr. Duponceau, Letter XVIII.

commenced with the names of persons and things, where, to some extent, it is common to all languages, and have been gradually extended to other parts of speech, in which its chief peculiarity consists.

Another feature of American languages, pronounced by Mr. Gallatin to be the most remarkable one, may, possibly, be attributed to the absence of the substantive verb *to be*, as an auxiliary. It is a controverted question, whether a true substantive verb—that is to say, one that conveys the abstract idea of existence—can be found in the American languages. But it is certain that, where we use the verb *to be* in connection with an attribute or a noun, that verb is omitted by the Indians, and the attribute or noun is converted into an intransitive verb. Instead of saying, I *am* cold, I *am* a man, the Indians say, “I cold,” “I man,” and the nouns “cold” and “man” become intransitive verbs, and are conjugated through all the persons, tenses, and moods, like other verbs; number and person being expressed by variations of the pronoun, while other distinctions are produced by inflexions of the word itself.

Nearly all parts of speech are, in like manner, convertible into verbs; and very nice varieties of action are indicated by the insertion of particles having the effect of adverbs, but having no separate existence as such. Thus, an action may be in contemplation, or on the point of execution; it may be done well or ill, quickly or otherwise, jointly, rarely, repeatedly, habitually, &c.; or doubt, denial, and various degrees of assertion, may be expressed—whether it rains hard, by showers, steadily, &c.—whether you see near, or far off, &c. &c.

By the joint means of agglomeration, and the use of particles and inflections, it will be seen that very delicate shades of meaning may be attained; but they are applicable only to the case in hand, and the expression cannot be made to serve a general or abstract purpose.

In some dialects, a form of plural has been noticed, that distinguishes between a particular number and an indefinite number of objects, and by some writers this has been termed “the American plural.”

Extreme precision is, indeed, a general characteristic of American languages; and yet the masculine and feminine genders are not always clearly distinguished. The distinction made by most of the northern Indians is whether the object is animate or inanimate; and this is indicated with great care. A remarkable peculiarity, however, in relation to sex, may be mentioned, as a feature said to be common to all the American nations. While the terms for younger brother and younger sister are identical (except among the Iroquois), in expressing the various degrees and modifications of kindred, such as elder or younger brother or sister, paternal or maternal uncle or aunt, &c., the women use different words from the men; a habit that seems to be confined to that subject, or analogous ones.

We shall venture to specify no more peculiarities. It is only in its bearings upon ethnological questions that the philosophy of language has any connection with our purpose. Mr. Bancroft has undertaken to explain the characteristic features of the American languages in the third volume of his history. His description is at once elaborate and felicitously graphic. If not universally appli-

cable in all its details, it is probably a correct analysis of the most prominent dialects of the United States. Speaking of the practice of agglutination, or synthesis, he says :

“ If we search for the distinguishing traits of our American languages, we shall find the synthetic character pervading them all, and establishing their rules. The American does not separate the component parts of the proposition which he utters; he never analyzes his expressions; his thoughts rush forth in a troop. His speech is as a kindling cloud, not as radiant points of light. This absence of all reflective consciousness, and of all logical analysis of ideas, is the great peculiarity of American speech. Every complex idea is expressed in a group. Synthesis governs every form; it pervades all the dialects of the Iroquois and the Algonkin, and equally stamps the character of the language of the Cherokee.”

“ It has been asked if our Indians were not the wrecks of more civilized nations? Their language refutes the hypothesis; every one of its forms is a witness that their ancestors were, like themselves, not yet disenthralled from nature. The character of each Indian language is one continued, universal, all-pervading synthesis. They to whom these languages were the mother tongue, were still in that earliest stage of intellectual culture where reflection has not begun.”¹

Mr. Schoolcraft, in his Essay on the grammatical structure of the Algonkin language, one of the most extensive of Indian forms of speech, has intimated an opinion that it was built up from monosyllabic roots.² It is very probable that the same may have been the case with all American dialects; and, while they exhibit different degrees of advancement from that primitive condition (the Otomis, a rude and inferior tribe, retaining most of the original form) to whatever stage of refinement they may have attained, the system of progression has been determined by the laws of intellectual and physical organization peculiar to the race; hence the radical unity observable throughout the continent.³ It may be, therefore, that the philosophy of American speech, the phenomena constituting its genius, will not be fully comprehended until the metaphysical, physiological, and possibly phrenological traits of the aborigines are accurately determined. The acuteness of the senses, especially that of hearing, exerts a material influence on the structure of language. Many compounded words of the Indians require a delicate articulation, and a very nice discrimination of tone, assisted by signs addressed to the eye. The predominance of certain faculties of mind, and the absence or inactivity of others, by which different families of men are distinguished, a prevailing temperament, and purely physical habits, all combine to constitute the mould in which the forms of speech are modelled; and where these attributes are the same, a similar linguistic system will be generated.

It is by no means improbable that the aspect of the question concerning the

¹ See also Mr. Prescott's "Conquest of Mexico," III, 393, *et seq.*

² Gov. Cass, N. A. Rev., XXVI, before referred to, makes a similar suggestion.

³ The supposed grammatical isolation of the Otomi language has been questioned by Dr. Latham, "Varieties of Man," p. 408.

abnormal character of American forms of speech may be much modified hereafter, that the number of distinct dialects may be reduced, and that their apparent contrast to the grammatical systems of other nations may prove to be less marked than has been imagined.

It was suggested by Alexander Von Humboldt (who, although devoting less attention to philological studies than his brother William, shared with the latter his interest in American languages, and supplied a portion of his materials), that the rigid distinction between development by inflexion and the combination of agglutinated particles might not always bear the test of scrutiny.¹

There are recent indications that the verb substantive, even as an auxiliary, may be discovered to exist in effect where it has been believed to be wanting. The indefinite article, and the masculine and feminine genders, are also claimed for some dialects.²

There are very few points asserted by any one philologist that are not questioned by some other. Mr. Gallatin's illustration of the permanency of dialects, derived from the supposed fact that the earliest vocabularies could still be used in communicating with the Indians, is opposed to the observation of Colonel Smith, who mentions having learned on the spot that the catechisms printed in the Huron and other languages, not quite a century ago, are now understood only in consequence of daily repetition and careful explanation.³

But notwithstanding contrarieties of opinion and testimony, the archæological inferences of principal importance that have been drawn from such inquiries are not materially disturbed. These are that the ancestors of the present Indians must have occupied this country, or have been separated from other nations, at a very remote—perhaps the remotest—period of history, and that proofs of connection with more civilized races are not manifest in their dialects.

Whatever discoveries may be claimed, or suggestions ventured, by partial observers, at variance with the judgment of those who have made the whole subject a matter of study, they cannot be regarded as entitled to similar confidence until they have received the sanction of investigations equally prolonged and extended.

A greater reliance may be placed upon the general uniformity of structure among the American languages, and a general diversity from those of the eastern hemi-

¹ Personal Narrative, 2d Lond. ed., III, 263-4.

² See "Grammar of the Dakota Language," by Rev. S. R. Riggs, *Smithson. Contrib.* IV.

Rev. Dr. Hawks, whose translation of the work of Rivero and Von Tschudi on Peruvian antiquities was published in 1853, says, in a note to the chapter on American languages, where the writers adopt and confirm from their own observations the conclusions of Duponeau and Gallatin: "He who has studied these most carefully will be most cautious in making general conclusions." And he cites, in confirmation of this view, the opinion of Mr. Wm. W. Turner, who has devoted a good deal of attention to the subject of American languages, and according to whose suggestions the Dakota grammar of Rev. S. R. Riggs was entirely remodelled before publication.

In another place, Dr. Hawks informs the reader that he is himself engaged in researches for "a work on the antiquities of America generally." Its completion will be looked forward to with interest.

³ *Nat. Hist. of the Human Species*, p. 259.

sphere, than upon any exceptional instances that may be detected.¹ Thus while the question of foreign derivation may be left to stand or fall with that of the unity of the human species, the philological indications of extreme antiquity claimed for the American race as a variety of mankind will hardly be disputed.

There is a curious circumstance which deserves to be mentioned before leaving this subject. It is that the European language which has been pointed out as most nearly resembling those of the American aborigines, in its employment of the principle of agglutination, is the Basque or Euskarian; and this is supposed to have been a language of the *aborigines of Europe*, who, by the irruption of the Celts and Indo-Germanic races from the East, were either exterminated or driven to inaccessible regions. Of these the Lapps and Finns, and the Euskarians of the Biscayan provinces, have been regarded by some writers as the remnant.²

The physical attributes of aboriginal Americans have furnished arguments in favor of the unity and antiquity of the race, subject to an equal want of harmony of sentiment in regard to matters of fact.

As in what has been said of native languages the object has been to present the American view of the subject almost exclusively, for similar reasons the archæological deductions of the physiologist will be examined chiefly from the same point of observation.

The inquiry is not what opinions Buffon, Cuvier, Blumenbach, Prichard, Lawrence, Smith, and other writers on the natural history of man in general, have entertained concerning the origin and varieties of the human species—and reference to these must be brief and incidental—but the aim is to ascertain what impressions have been interwoven with ethnological studies and discussions here; what special comparisons have been instituted; and what substantial results, if any, have been reached by the scientific men of our own country.

There has been great unanimity among writers usually regarded as authorities, in considering the American race—not including the Eskimaux—as a distinct variety of human kind; and whatever deviations have been made from the systems of Linnæus, Buffon, and Blumenbach, this division has generally been retained by their successors.

The propriety of distinguishing between the occupants of the polar regions and other inhabitants of the continent has also been commonly recognized.³

¹ "Neither the analogy nor the diversity of language can suffice to solve the great problem of the filiation of nations."—*Humboldt, Personal Narrative*, III, 285.

"Humanity has a common character. The ingenious scholar may find analogies in language, customs, institutions, and religion, between the aborigines of America and any nation whatever of the Old World."—*Bancroft, Hist. of U. S.*, III, 312.

² Prof. Carpenter, in "Cyclop. of Anat. and Physiol.," p. 1349. Latham, in "Varieties of Man," p. 551, who quotes Arndt and Rask, distinguished Scandinavian ethnologists.

³ "The Eskimaux are manifestly a race of men distinct from all the nations of the American continent, in language, in disposition, and in habits of life. But among all the other inhabitants of America there is such a striking similitude in the form of their bodies, and the qualities of their minds,

The physical resemblance of the residue of the original population to each other has impressed the observer more forcibly than any variations of form and color. It is mentioned by Robertson as remarkable, that there is less variety in the human form throughout the New World than in the ancient continent; and that the varieties in any single race of the Old World are greater than in the widely scattered inhabitants of the two Americas.

With this general uniformity among themselves, the striking similarity of the Americans to two other classes or varieties of the human species has been not less universally noticed.

Aside from the theories of multifarious origin, and of colonial settlements by civilized nations at different periods, the belief has prevailed, as stated in previous pages, that the physical, moral, and intellectual traits, as well as the arts and customs of the various tribes, were to be explained by tracing their descent from either the Northern or Southern Asiatics. These were often confounded under a common name, as Tartars or Scythians, but correspond to the separate divisions of Mongolian and Malay in Blumenbach's classification.

When opportunities of comparison were more rare than they have been since, it was customary to refer to the testimony of Smibert, the portrait painter, and Ledyard, the traveller, as having somewhat of the authority which in our courts of law is given to the evidence of *experts*. The first had painted several Tartars for the Duke of Tuscany; and when he arrived with Bishop Berkley at Newport, in 1739, and saw our Indians, he pronounced them to be the same people. The other, who had been familiar from boyhood with the Indians of Connecticut, declared the Mongolians of Siberia to be universally and substantially like the American natives.

Governor Pownall stated, in 1766, that "the American inhabitants are the same race of people from one end of the continent to the other; and are the same race

that, notwithstanding the diversities occasioned by the influence of climate, or unequal progress of improvement, we must pronounce them to be descended from one source."—*Robertson's Am.*, Lib. iv. p. 41.

"We ought to admit, as an established fact, that the Americans, whatever their origin may be, constitute, at the present day, a race essentially different from the rest of mankind. The truth of this proposition has been demonstrated by a long course of physiological observations."—*Malte Brun, Geog.*, Lib. lxxv.

"The nations of America, except those which border the polar circle, form a single race, characterized by the formation of the skull, the color of the skin, the extreme thinness of the beard, and the straight glossy hair."—*Humboldt's Researches*, Preface, p. 14.

"The fourth, or American variety, includes all the Americans, excepting the inhabitants of the northern parts of the Continent, which I have placed in the Mongolian division."—*Lawrence's Lectures*, p. 313.

"The aborigines of America, or those nations whose abode in the Western Continent dates from a period antecedent to history, may be said to form a well-marked division of the human family; from which, however, we ought to except the Esquimaux, and some other tribes."—*Prichard's Researches*, I, 268.

"The American race includes all the aborigines of the New World, except the Esquimaux."—*Wiseman's Lectures*, I, 167.

or family as the Tartars, precisely of the same color, of the same form of skull, of the same species of hair, not to mention the language and their names."¹

Jefferson says, in his Notes on Virginia, "The resemblance between the Indians of America and the eastern inhabitants of Asia, would induce us to conjecture that the former are descendants of the latter, or the latter of the former; excepting, indeed, the Esquimaux, who, from the same circumstances of resemblance, and from identity of language, must be derived from the Greenlanders, and these, probably, from some of the northern parts of the old continent."²

Still, notwithstanding that kind of similitude which is best expressed by the phrase *tout ensemble*, a decided difference of particular features has been evident to careful observers. While pointing out the remarkable resemblance between the Americans, Mongols, and Malays, Alexander Von Humboldt refused to admit a necessary identity of race, asserting that, in fact, osteology teaches us that the cranium of the American differs essentially from that of the Mongol.³

In the very difficult operation of drawing lines of demarcation between the assumed varieties of mankind, some test more certain than color, or any merely external attribute, has been regarded as necessary. Camper and Blumenbach advanced the idea more than half a century ago that a comparison of *crania* was a principal requisite in such inquiries. But, according to Cardinal Wiseman, this conception of deriving from cranial peculiarities a basis of classification originated with our Provincial Governor, Thomas Pownall, who was equally remarkable for political sagacity and a love of philosophical research.⁴ Camper has the merit of devising a rule by which the crania of different nations might be mutually compared, so as to give definite results, and his system of observation was matured and

¹ Knox's New Coll. of Voyages, II, 273.

² Notes on Virginia, p. 148.

In the Boston News Letter of June 29, 1749, is a notice of a meeting between three Indians from Greenland and two from Surinam, and some Delawares and Mohegans, at Bethlchem, in Pennsylvania, they being all converts of Moravian missionaries. Though their native lands were so wide asunder, "what they observed of each other's hair, eyes, and complexion, convinced them that they were all of the same race."

³ "What we have been stating as to the exterior form of the indigenous Americans, confirms the accounts of other travellers of the striking analogy between the Americans and the Mongol race. This analogy is particularly evident in the color of the skin and hair, in the defective beard, high cheek bones, and in the direction of the eyes. We cannot refuse to admit that the human species does not contain races resembling one another more than the Americans, Mongols, Mantchoux, and Malays. But the resemblance of some features does not constitute an *identity* of race. In fact, osteology teaches us that the cranium of the American differs essentially from that of the Mongol; the former exhibits a facial line more inclined, though straighter, than that of the negro; and there is no race on the globe in which the frontal bone is more depressed backwards, or which has a less projecting forehead. The cheek bones of the American are almost as prominent as those of the Mongol; but the contours are more rounded, and the angles not so sharp. The under jaw is larger than the negro's, and its branches are less dispersed than the Mongol's. The occipital bone is less curved (*bombé*), and the protuberances which correspond to the *cerebellum*, to which the system of M. Gall attaches great importance, are scarcely sensible."—*Political Essay*, Black's trans., I, 153–155.

An equal difference in the form of the nose is noted in his Personal Narrative, III, 224, 2d Lond. ed.

⁴ Wiseman's Lectures, 5th Lond. ed., I, 158.

materially improved by Blumenbach; while to the methods of these naturalists important additions have been suggested by Professor Owen.

Very high expectations were formed that more trustworthy conclusions would be derived from osteological comparisons than other methods of examination had yielded; and an eager desire was manifested to obtain from this country the means of tracing anatomically the affiliation of its people.¹

Although the attention of scientific Americans was particularly called to this department of inquiry by the philosophers of Europe, its prosecution was attended with difficulties which only the most persevering zeal could overcome. Not only were cabinets of foreign crania beyond the reach of our students, but skulls of our aborigines, well authenticated with regard to the period and the tribe or race to which they belonged, were by no means easy to be obtained; yet a response creditable at once to the enterprise and the ability of American scholars has not been wanting.

In September, 1837, Dr. John C. Warren, of Boston, read before the British Association for the Advancement of Science a paper on crania found in western mounds. After stating that these crania differed from those of the present Indians, from the Caucasian or European, and from all existing nations so far as they are known, but had an exact resemblance to the ancient Peruvian heads, he remarked upon a degree of similarity shown by anatomy between the crania spoken of and those of the modern Hindoos. From all the facts he had observed he drew the following inferences:

"1st. The race whose remains were discovered in the mounds were different from the existing North American Indians. 2d. The ancient race of the mounds is identical with the ancient Peruvians." To these conclusions he thought others might be added tending to support existing opinions, but which are hypothetical:—"1st. That the ancient North American and the Peruvian natives were derived from the southern part of Asia. 2d. That America was peopled from at least two

Governor Pownal appears to have possessed a very suggestive mind, and one unusually quick and prospective in its perceptions. His political anticipations are among the most striking instances of foresight to be found on record. Cardinal Wiseman's reference is to a passage in Knox's "New Collection of Voyages," printed in 1766. In 1782, Governor Pownal published a treatise on the study of antiquities as the commentary to historical learning; with an appendix on the elements of speech, and the origin of written language. In 1787, appeared his "Hydraulic and Nautical Observations on the Currents in the Atlantic," in some measure anticipating the idea since realized by modern research. In 1795, he printed what he called "An Antiquarian Romanee; endeavoring to mark a line by which the most ancient people, and the processions of the earliest inhabitant of Europe may be investigated," &c.

It is to be regretted that only a portion of his philosophical and ethnological treatises (which were numerous) are known to be in this country.

¹ "Let us hope," said Humboldt, "that the learned men who now honor the United States will hasten to convey the skeletons of the tumuli, and those of the caverns, to Europe, that they may be compared together, and with the present inhabitants of native race, as well as with the individuals of Malay, Mongol, and Caucasian race, found in the great collections of MM. Cuvier, Sæmmering, and Blumenbach."—*Personal Narrative*, VI, 319.

different parts of Asia; the ancient population having been derived from the south, and the present Indian race from the more northern part of the same continent."¹

It will be noticed that these views, so far as they relate to the origin of population, are simply in accordance with such as had been long entertained, although previously founded on other than anatomical facts.

Dr. Warren's examinations, however carefully and scientifically conducted, were limited to a small number of crania; but a collection was then in progress, intended to be sufficiently numerous and varied to insure reliable results.

In 1830, Dr. Samuel G. Morton, of Philadelphia, already distinguished as a naturalist, having occasion to lecture on the form of the skull as exhibited in the five races of man, found himself unable to procure specimens of each for his illustrations. Impressed with this great scientific deficiency, he resolved upon making a collection himself.

By the most indefatigable exertions, and a large expenditure of time and money, he succeeded in obtaining a cabinet of crania superior to any in the world.² With these means he prepared his *Crania Americana*, which has been received by common consent into the highest ranks of that department of literature.³ In 1842, he read before the Boston Society of Natural History an essay which was afterwards printed with the title of "An Inquiry into the Distinctive Characteristics of the Aboriginal Race of America." A second edition appeared in 1844, and in that year his *Crania Ægyptiaca* was published with the Transactions of the American Philosophical Society.

As having more elaborately than any predecessor investigated the comparative physiology of our aborigines, and applied to a greater extent those anatomical tests supposed to be most conclusive in determining national affinities, he must be regarded as representing the highest advance which that branch of science has made in this country. And more than this, his reputation abroad and at home as an able and learned ethnologist has given to his views a position of authority that

¹ Am. Journal of Science, XXXIV, 47.

² The cost to Dr. Morton was estimated at from ten to fifteen thousand dollars, and at the time of his death he had accumulated nearly a thousand human skulls, derived from all quarters of the globe.—Dr. Patterson's *Memoir of Morton*, in "*Types of Mankind*."

³ "*Crania Americana, or a Comparative View of the Skulls of the various Aboriginal Nations of North and South America. To which is prefixed an Essay on the Varieties of the Human Species.*" Philad. and Lond., 1839.

Alexander Von Humboldt addressed a complimentary letter to Dr. Morton in January, 1844, containing these expressive words:

"Les richesses craniologiques que vous avez été assez heureux de réunir, ont trouvé en vous un digne interprète. Votre ouvrage, Monsieur, est également remarquable par la profondeur des vues anatomiques, par le détail numérique des rapports de conformation organique, par l'absence des rêveries poétiques qui sont les mythes de la physiologie moderne, par les généralités dont votre 'Introductory Essay' abonde. Rédigeant dans ce moment le plus important de mes ouvrages, qui sera publié sous le titre imprudent de *Kosmos*, je saurai profiter de tant d'excellents aperçus sur la distribution des races humaines qui se trouvent épars dans votre beau volume. Que de sacrifices pécuniaires n'avez vous pas dû faire, pour atteindre une si grande perfection artistique, et produire un ouvrage qui rivalise avec tout ce que l'on a fait de plus beau en Angleterre et en France."

is not merely national, and one that can be yielded only to advantages and talents that are shown to be superior.¹

Dr. Morton undertook to furnish for Mr. Schoolcraft's national work an article on the Physical Type of the American Indians; but his death occurring before the paper was completed, it was brought to a conclusion by his friend, John S. Phillips, Esq., to whom the *Crania Americana* was dedicated.²

The Inquiry into the Distinctive Characteristics of the Aboriginal Race contains a compendious view of the author's deductions in reference to the archæological points of which we are treating; and from that our condensed summary will be mainly, but not exclusively drawn.

Dr. Morton adopts the general divisions of mankind assumed by Blumenbach, simply substituting the word *race* for the term "variety" of the German author. While he admits the unity of the human species, he conceives that "each race was adapted from the beginning (by an all-wise Providence) to its peculiar local destination;" in other words, that "the physical characters which distinguish different races are independent of external causes." He regards the American race as possessing certain physical traits that serve to identify it in localities the most remote from each other. He divides the race into the "*Toltec* family," or demi-civilized nations, and the "*American* family," which embraces all the barbarous tribes of the New World, excepting the Polar tribes, or Mongol Americans. The Eskimaux, and especially the Greenlanders, are held to be a partially mixed race, among whom the physical character of the Mongolian predominates, while their language presents obvious analogies to that of the Chippewas who border them on the south. The two "families" above mentioned are regarded as similar in physical, but less alike in intellectual attributes.

He says it is an adage among travellers that he who has seen one tribe of Indians has seen all, so much do individuals of this race resemble one another. All possess alike the long, black, lank hair, the brown skin, the heavy brow, the dull, sleepy eye, the full, compressed lips, and the salient, but dilated nose. Although physical diversities do occur, they are mere exceptions to a general rule, and do not alter the peculiar physiognomy of the Indian, which is as undeviatingly characteristic as that of the negro, and cannot be mistaken for that of any other race. This remark, he maintains, is equally applicable to the ancient and modern nations of our continent; for the oldest skulls from the Peruvian cemeteries, the tombs of Mexico, and the mounds of the United States, are of the same type as the heads of the most savage existing tribes. Their physical organization proves the origin of one to have been equally the origin of all. The various civilized nations are to this day represented by their lineal descendants, who inhabit their ancestral seats, and differ in no respect from the wild and uncultivated Indian. He had been of opinion that the ancient Peruvians who inhabited the confines of Lake Titicaca

¹ "The magnificent publication of Dr. Morton, which far exceeds in its comprehensiveness, and in the number and beauty of its engravings, any European work that has yet appeared on national varieties of the skull, comprises nearly the sum of our information on the distinctive characters of the head and skeleton in the several tribes of the New World."—*Prichard, Nat. Hist. of Man*, 4th ed. II, 502.

² *Hist. and Prosp. of the Indian Tribes*, II, 315.

presented a congenital form of head entirely different from that which characterizes the great American race, but believed it to have been fully established by the observations of M. D'Orbigny that the peculiarities of shape were wholly artificial, and the result of pressure in infancy.¹

The osteological characters are thus detailed in Dr. Morton's latest production : "The Indian skull is of a decidedly rounded form. The occipital portion is flattened in the upward direction, and the transverse diameter, as measured between the parietal bones, is remarkably wide, and often exceeds the longitudinal line. The forehead is low and receding, and rarely arched as in the other races ; a feature that is regarded by Humboldt, Lund, and other naturalists, as a characteristic of the American race, and serving to distinguish it even from the Mongolian. The cheek bones are high, but not much expanded ; the whole maxillary region is salient and ponderous, with teeth of a corresponding size, and singularly free from decay. The orbits are large and squared, the nasal orifice wide, and the bones that protect it arched and expanded. The lower jaw is massive, and wide between the condyles ; but, notwithstanding the prominent position of the face, the teeth are for the most part vertical."²

Such are the traits indicated by a comparison of upwards of four hundred crania of tribes inhabiting almost every region of North and South America. It is stated that the acute angles of the eyes seldom present the obliquity so common in the Malays and Mongolians ; that the color of the eye is almost uniformly between black and gray ; and that, even in young persons, it seldom has the brightness, or expresses the vivacity, usual in the more civilized races.

The *moral* constitution of the Americans is regarded as not less specific than the physical, and as equally pervading the entire race. The *intellectual* appears to exhibit greater diversity, and Dr. Morton has arbitrarily grouped the aborigines into two families : one embracing the tribes which had made advances in civilization, and termed by him *Toltecan* ; the other, a more numerous division, consisting of those remaining in a barbarous condition, which he calls *American*. These appellations are by no means satisfactory or distinctive, unless the Toltecan are

¹ It will be seen, on subsequent pages, that this curious question continues to be involved in its original obscurity. Humboldt wrote, in 1808, "This extraordinary flatness is found among nations to whom the means of producing artificial deformity are totally unknown, as is proved by the crania of Mexican Indians, Peruvians, and Aures, brought over by M. Boupland and myself, of which several were deposited in the Museum of Natural History at Paris. I am inclined to believe that the barbarous custom which prevails among several hordes of pressing the heads of children between two boards, had its origin in the idea that beauty consists in such a form of the frontal bone as to characterize the race in a decided manner."—*Political Essay*, I, 154.

Dr. Morton, when he published his *Crania Americana*, concurred in this view, but was led to change his opinions by the statements of D'Orbigny, who was supposed to have proved, by an examination of the tombs of the ancient race, that the greater number of crania were not flattened ; that the peculiarity was confined to the men ; and, as the most ill-shaped heads were found in the largest and finest tombs, that the deformity was a mark of distinction. Traces of the bandages and the mode of their application were also believed to be clearly discernible.—*L'homme Américain considéré sous ses Rap. Phys. et Mor.*, par Alcide D'Orbigny. 1839.

² Schoolcraft's *Hist. and Prosp.*, &c., II, 316.

regarded as a different race from the Americans, which is expressly denied. It is remarked that the civilized states do not stand isolated from their barbarous neighbors, but that these gradually merge into each other, so that some nations are with difficulty classed with either division, and that the diversity is not greater than has been known to exist between the same people, in other parts of the world, at different periods of their history. The intellectual disparity that is pointed out as existing between the Mongolians and Malays, and the more barbarous Americans, would seem to admit of some qualification. The latter are regarded as decidedly of an inferior nature; as not only averse to the restraints of education, but, for the most part, incapable of a continued process of reasoning upon abstract subjects; as wanting mechanical ingenuity, and as possessing but an humble grade of the imitative faculty. "Savage or civilized, the sea has had few charms for the American, and his navigation has been almost exclusively confined to lakes and rivers, and a canoe, excavated from a single log, has been his principal vessel. On the other hand, the Mongolians and Malays are proverbially aquatic in their habits, and exhibit a considerable degree of mechanical contrivance. Their greater constructiveness is exhibited in their dwellings, as well as in their implements and utensils, while an absence of the courage, cunning, cruelty, and improvidence, that are so habitual in the red man, is characteristic of the moral nature of the Eskimaux. These people, too, are remarkable for a large and rather elongated head, which is low in front and projecting behind; great width and flatness of the face; eyes small and black; mouth small and round; and nose so diminutive and depressed that, on looking at a skull in profile, the nasal bones are hardly visible. Their complexion, moreover, is comparatively fair, and there is a tendency throughout life to fulness and obesity. It is stated by the traveller Hearne that the Indian tribes who are their proximate neighbors on the south once excused an unprovoked massacre of Eskimaux men, women, and children, by asserting that they were a people of a different nature and origin from themselves."

Dr. Morton adverts to the opinion of Gallatin, that analogies of words and grammatical forms prove the cognate relation of the Eskimaux and other Indians. This he pronounces a mere postulate. "For, from the evidence adduced in respect to the ethnographic difference between these people, we have a right to infer that the resemblance in their respective languages has not been derived by the greater from the lesser source—not by the Americans from the Eskimaux—but the reverse; for the Asiatics, having arrived at various periods, and in small parties, would naturally, if not unavoidably, adopt more or less of the language of the people among whom they settled, until their own dialects finally merged in those of the Indians who bound them on the south."¹

In addition to what has been said of the Mongolian features, as seen in the Eskimaux, it is remarked that there are some characters so prevalent as to pervade all the ramifications of the great Mongolian stock, from the repulsive Calmuck

¹ Latham seems to accord with Morton on this point. "Physically, the Eskimaux is a Mongol and Asiatic; philologically, he is an American, at least in respect to the principles upon which his speech is constructed."—*Varieties of Man*, p. 288.

to the polished and more delicately featured Chinese. These are, the small, depressed, and seemingly broken nose; the oblique position of the eye, which is drawn up at the external angle; the great width between the cheek bones, which are not only high but expanded laterally; the arched and linear eyebrow; and, lastly, the complexion, which is invariably some shade of yellow or olive, and almost equally distant from the fair tint of the European and the red hue of the Indian. "In fine," says Dr. Morton, "we are constrained to believe that there is no more resemblance between the Indian and Mongolian, in respect to arts, architecture, mental features, and social usages, than exists between any other two distinct races of mankind."

In reference to the idea that America has been peopled by the Malay race (which, in the ordinary classification, includes the Malays proper of the Indian Archipelago and the Polynesians in all their numberless localities), it is said: "These people have so much of the Mongolian character, that nearly the same objections arise to both. The head of the Malay proper is more like that of the Indian, because it not unfrequently presents something of the vertical form of the occiput, and the transverse diameter, as measured between the parietal bones, is also remarkably large. But, excepting in these respects, the osteological development coincides with that of the Mongolian; while the category of objections urged against the latter people is equally valid in respect to the whole Malay race."

The various points alluded to in the above summary, are discussed by Dr. Morton with force and ability, and his essay closes with the following comprehensive declaration:

"Our own conclusion, long ago deduced from a patient examination of the facts thus briefly and inadequately stated, is, that the American race is essentially separate and peculiar, whether we regard it in its physical, its moral, or its intellectual relations. To us, there are no direct or obvious links between the people of the Old World and the New; for, even admitting the seeming analogies to which we have alluded, these are so few in number, and evidently so casual, as not to invalidate the main position. And, even if it should be hereafter shown that the arts, sciences, and religion of America can be traced to an exotic source, I maintain that the organic characters of the people themselves, through all their endless ramifications of tribes and nations, prove them to belong to one and the same race, and that this race is distinct from all others."

These are the views that have, in substance, been repeated by Dr. Morton in various connections, and at different periods. In one place he says: "I can aver that sixteen years of almost daily comparisons have only confirmed me in the conclusions announced in my *Crania Americana*, that all the American nations, excepting the Eskimaux, are of one race, and that this race is peculiar and distinct from all others."¹

In one of his papers he observes: "I regard the American nations as the true *autochthones*—the primæval inhabitants of this vast continent—and when I speak of their being of one race and of one origin, I allude only to their indigenous

¹ "Ethnography and Archæology of the American Aborigines," p. 9. New Haven, 1846.

relation to each other, as shown in all those attributes of mind and body which have been so amply illustrated by modern ethnography."¹ He admits that there might have been, in ancient times, occasional or accidental immigrations from the Old World, though too small to affect materially the language or the type of the Aborigines.²

The subject of American ethnology passes so insensibly into the general question of the original unity or diversity of mankind, that it is not easy to refer to the various forms and shades of opinion pertaining to a consideration of the former without an appearance of entering a field of contention which it is desirable to avoid. Yet the convictions of men of science, that may be supposed to influence, more or less directly, the manner of regarding the archaeological problem of primeval population in this country, cannot be entirely excluded from these pages on account of the polemical associations they have acquired. Whether man was created in one pair, or in many pairs, in one locality or in many localities, is an inquiry that forces itself into the study of any division of his history. Its discussion has added to the interest of philological and physiological investigations, but has no other necessary bearing upon the proper theme of this memoir, than as it affects the question of the derivation of the American aborigines from any other people within the historical period. In alluding briefly to these collateral elements of opinion, it is intended to observe strictly the rule of the Ethnological Society of Paris, in relation to the vexed point of dispute: "Dans l'état actuel de nos connaissances, la question est insoluble au point de vue scientifique et ne peut être utilement débattue. Or telle a toujours été à cet égard l'opinion adoptée et la ligne de conduite suivie par la Société Ethnologique."³

Dr. Morton endeavored to avoid the topic in his principal work; but as his sentiments were freely declared in subsequent publications, they are usually blended with his purely technical exposition of American physiology. They have been made more prominent by the authors of "Types of Mankind" in connection with a "*Sketch of the natural provinces of the animal world, and their relation to the different types of man*," contributed by Professor Agassiz.⁴ The elevated standing of these

¹ Trans. of the Am. Ethnol. Soc., II, 219.

² In noticing a few of the hypotheses that have been formed to solve the problem of the origin of the monuments of America, independently of any agency of the aboriginal race, Dr. Morton refers to the opinion which has been advanced, that they are the work of a branch of the great Cyclopean family of the old world, known by the various designations of the Shepherd Kings of Egypt, the Anakim of Syria, the Oscans of Etruria, and the Pelasgians of Greece. *Wandering Masons* they were also called, and are supposed to have passed from Asia into America at a very early epoch of history, and to have built the more ancient monuments which are attributed to the Toltec nation.

It is probable that he had in his mind an article on Mexican antiquities in the *Foreign Quarterly Review* for October, 1836, where the proposition is maintained that the Toltecs were a branch of the Shepherd Kings, or Cyclopeans—that is, they were Canaanites. "The builders of the Cyclopean monuments of Palenque, &c. &c., were the Anakim or Cyclopean family of Syria, who, with their brethren the Canaanites, were vanquished or expelled by Joshua"—thus reviving the theory of President Styles.

³ Bulletin de la Société, 1846, p. 81.

⁴ TYPES OF MANKIND, or Ethnological researches, based upon the ancient monuments, paintings,

prominent naturalists gives great weight, and a high degree of scientific interest, to whatever conclusions have resulted from their researches.

They both disavow any inconsistency between their theories and a rational interpretation of Scripture, and they claim that these involve no greater latitude of construction than geologists require for their material systems. They assert the moral and physical unity of the human species, which they do not imagine to be dependent on a common parentage, but regard as possessing a common and indivisible nature under whatever varieties of aspect and manifestation it is acknowledged to be found.

The deductions from natural science of Professors Morton and Agassiz, as applied to both local and general ethnology, are materially relied on in the work of Messrs. Nott and Gliddon; and those of Dr. Morton, in particular, are represented as the basis of that extended dissertation.¹

Without attempting an analysis of the doctrines there maintained, or aiming to follow the order of their discussion, we may state, in a condensed form, some of the leading paleological propositions which relate to this continent, as follows:—

“There exists no data by which we can approximate the date of man’s first appearance upon earth; and for aught we yet know, it may be thousands or millions of years beyond our reach.”

“*Human Fossil Remains* have now been found so frequently, and in circumstances so unequivocal, that the facts can hardly be denied.”

“Geology finds the oldest landmarks in America.”

“The human fossils of Brazil and Florida, carry back the aboriginal population of this continent far beyond the necessity of hunting for American man’s foreign origin through Asiatic immigration.”

“The form of these (fossil) crania, moreover, proves that the general *type* of races inhabiting America at that inconceivably remote era was the same which prevailed at the period of the Columbian discovery.”

“There are natural relations between the different types of man and the animals and plants inhabiting the same regions.”

“The laws which regulate the diversity of animals, and their distribution upon the earth, apply equally to man, *within the same limits, and in the same degree.*”

“Not a single animal, bird, reptile, fish or plant, was common to the Old and New Worlds.”

sculptures, and crania of races, and upon their natural, geographical, philological, and biblical history: Illustrated by selections from the inedited papers of Samuel George Morton, M. D., and by additional contributions from Prof. L. Agassiz, LL. D.; W. Usher, M. D.; and Prof. H. S. Patterson, M. D. By J. C. Nott, M. D., and Geo. R. Gliddon. 1854.

¹ Dr. Nott, in his *Introduction*, says: “It will be observed that, with the exception of Morton’s, we seldom quote works on the Natural History of Man, and simply for the reason that their arguments are all based, more or less, on fabled analogies, which are at last proved by the monuments of Egypt and Assyria to be worthless. The whole method of treating the subject is herein changed. To our point of view, most that has been written on human natural history becomes obsolete; and therefore we have not burdened our pages with citations from authors, even the most crudit and respected, whose views we consider the present work to have, in the main, superseded.”

These passages, taken almost at random, indicate the bearing of the argument upon the archæology of this continent.

The writers have aimed to construct a theory of human natural history from purely scientific facts and archæological discoveries.

The monuments of Egypt and Assyria, as explained by Belzoni, Champollion, Rossellini, Wilkinson, Lepsius, Layard, and others, are regarded as sources of reliable chronology, and, under the physiological expositions of Morton, as illustrating the original types of man. The geological and palæontological revelations of nature are studied, in preference to records and traditions, for light upon human origins; and in the general harmony, consistency, and uniformity of physical laws, and the mutual relations of the phenomena of the natural world, are professedly sought the means of solving the mystery of the creation and distribution of all organized beings.

Considered from this point of view, and without reference to any theological speculations or controversial disquisitions, in which the authors have indulged, their work is an exponent of a method of inquiry which might be expected to yield interesting results.

Professor Agassiz, in his contribution to this work, points out the manner in which the physical and organic features of the American continents vary from those of the Old World. In the Old World, the tropical realms are in strong contrast to the temperate zone; tropical Africa has hardly any species of animals in common with Europe; tropical Asia differs equally from its temperate regions; and Australia forms a world by itself. On the contrary, the range of mountains which extends in almost unbroken continuity from the Arctic zone to Cape Horn, establishes a similarity between North and South America, which may be traced also to a great extent in its plants and animals. Entire families, which are peculiar to this continent, have their representatives in both Americas. "Thus, with due qualification, it may be said that the whole continent of America is characterized by a much greater uniformity of its natural productions, combined with a special localization of many of its subordinate types, which will justify the establishment of many special faunæ within its boundaries." "With these facts before us, we may expect that there should be no great diversity among the tribes of man inhabiting this continent. At the same time it should be remembered, that in accordance with the zoological character of the whole realm, this race is divided into an infinite number of small tribes, presenting more or less difference one from another."

In the chapter on *The Aboriginal Races of America*, by Dr. Nott, it is remarked that, in treating of American races, the purpose is "simply to bring forward such facts as may be sufficient to establish their origin and antiquity," without going into details "respecting the infinitude of types which compose them." Having shown, as he thinks, "that the major divisions of the earth, or its different zoological provinces, were populated by groups of races bearing to each other certain family resemblances, notwithstanding that, in reality, these races originated in nations, and not in a single pair—thus forming proximate but not identical species"—he adduces the Mongols, the Caucasians, the Negroes, the Americans, as

each constituting a group of this kind. He considers it as acknowledged by all travellers that there is among the latter people a pervading type, a family resemblance, quite as strong, for example, as that seen at the present day among the full-blooded Jews; yet, although every tribe has some characters that mark it as *American*, there are certain sharply drawn distinctions among some of these races which cannot be explained by climatic influences. The two divisions adopted by Morton (viz: the Toltecan and the Barbarous tribes) are taken as illustrations. The first (says Dr. Nott) "comprising all the semi-civilized nations of Mexico, Peru, and Bogota, who, there is every reason to believe, were the builders of the great system of mounds found throughout North America," possessed certain cerebral peculiarities distinguishing them from the savage tribes by whom "the semi-civilized communities of America seem at all times to have been hemmed in and pressed upon as they are at the present day." Mr. Phillips's *Appendix* to Morton's memoir on *The Physical Type of the American Indians*, in the second volume of Mr. Schoolcraft's large work, and Mr. George Combe's phrenological remarks in the *Appendix* to Morton's *Crania Americana*, are quoted in explanation of this difference. According to these writers, the barbarous tribes have larger brains than those races capable of considerable progress in civilization, but the animal propensities outweigh and subordinate the intellectual portion of the character; while in the Mexicans and Peruvians, "the intellectual lobe of the brain is at least as large, and the intellectual and moral qualities being not so subordinate to the propensities and violent passions, are left more free to act."

This attempt to explain why races possessing an apparently inferior phrenological organization should exhibit superior reflective and inventive capacities, is accompanied by the following corollary:—

"These facts afford very instructive material for reflection. We here behold one race, with the larger though less intellectual brain, subjugating the unwarlike and half-civilized races; and it seems clear that the latter were destined to be either swallowed up or exterminated by the former. Who can doubt that similar occurrences had been going on over this continent for many centuries, or even thousands of years? There are scattered over North America countless tumuli, which it is believed were built by races different from the savage tribes found around them on the advent of the whites, and an impenetrable oblivion rests upon these earth-works. There are many reasons for supposing that these mound-builders were either identical with, or closely allied to, the Toltecs; and that they were driven south, or exterminated by more savage and bellicose races."

Dr. Nott expresses the opinion that the opposite intellectual and physical characters in the two great American families cannot be explained "except by primitive cranial formations, each aboriginally distinct;" and regards it "as more probable that each of these families, instead of springing from a single pair, have originated in many."

After quoting from the *Christian Examiner* of July, 1850, the views of Professor Agassiz upon the natural origin of speech, in which a parallel is drawn between the analogy in sound and structure of the languages of kindred nations and the similarity of intonation of the notes of closely allied species of birds, he suggests,

in explanation of the general uniformity of structure of the American languages, that among races osteologically allied, and possessing physical characters and instincts in common, it is probable that their primitive languages would more or less resemble each other; and that all languages which, in their infant state, come together, would necessarily become fused into one heterogeneous mass, after a period of more than five thousand years, for which, he considers, there is every reason to believe that this continent has been inhabited.

Dr. Nott presents his conclusions respecting the aboriginal races of America in the form of eight propositions, viz:—

“1. That the continent of America was unknown, not only to the ancient Egyptians and Chinese, but to the more modern Greeks and Romans.

2. That at the time of its discovery, this continent was populated by millions of people resembling each other, possessing peculiar moral and physical characteristics, and in utter contrast with any people of the Old World.

3. That the races were found surrounded everywhere by animals and plants specifically different from those of the Old World, and created, as it is conceded, in America.

4. That these races were found speaking several hundred languages, which, although often resembling each other in grammatical structure, differed, in general, entirely, in their vocabularies, and were all radically distinct from the languages of the Old World.

5. That their monuments, as seen in their architecture, sculpture, earth-works, shell-banks, &c., from their extent, dissemination, and incalculable numbers, furnish evidence of very high antiquity.

6. That the state of decomposition in which the skeletons of the mounds are found, and, above all, the peculiar anatomical structure of the few remaining crania, prove these mound-builders to have been both ancient and indigenous to the soil; because American crania, antique as well as modern, are unlike those of any other race of ancient or recent times.

7. That the aborigines of America possessed no alphabet, or truly phonetic system of writing—that they possessed none of the domestic animals, nor many of the oldest arts of the eastern hemisphere; whilst their agricultural plants were indigenous.

8. That their system of arithmetic was unique—that their astronomical knowledge, in the main, was indubitably of cis-atlantic origin; while their calendar was unlike that of any people, ancient or modern, of the other hemisphere.”

“Whatever exception,” he adds, “may be taken to any of these propositions separately, it must be conceded that, when viewed together, they form a mass of cumulative testimony, carrying the aborigines of America back to the remotest period of man’s existence on earth.”

The extracts from Morton’s inedited MSS., and Dr. Usher’s chapter entitled “Geology and Palæontology, in connection with Human Origins,” contain a summary of accounts, claiming to be authentic, of discoveries of human bones in a fossilized state.

Omitting the references to those of foreign lands, we find enumerated a human

skeleton preserved in the museum at Quebec, that was dug out of the solid schist-rock on which the citadel stands; several skeletons from Guadalupe, preserved in European cabinets, found in a rock described as "harder under the chisel than the finest statuary marble;" human fossils discovered by Dr. Lund, the Danish naturalist, in eight different localities, among the calcareous caves of Brazil, in connection with those of extinct species of animals—all represented as incorporated with a very hard breccia; and, from the same source, a human skull taken out of a sandstone rock now overgrown with lofty trees. Remains of a similar character, although from positions supposed to be less unequivocal, found in Mississippi and Florida, by Dr. Dickeson and others, are also named. All of these, it is believed, had previously been the subjects of communications to learned societies, with testimony in favor of their geological antiquity, and their cranial conformity to the aboriginal American type, exhibiting, in some instances, as stated, the American peculiarity of configuration in an excessive degree.¹ The concluding passage of Dr. Morton's inedited MSS. contains this prediction: "I have no doubt that man will yet be found as low down as the Eocene deposits, and that he walked the earth with the *Megalyonx* and *Palæotherium*."

The following is quoted by Dr. Usher as the language of Professor Agassiz, at Mobile, in April, 1853:—

¹ Am. Phil. Soc. Trans., III, 286-296: Communication from C. D. Meigs, M. D., on the human bones found at Santos, in Brazil. Am. Journ. of Science, &c., XXXII, 361: Dr. Moultrie's description of the skull of the Guadalupe fossil human skeleton. Proceed. of Phila. Acad. of Nat. Sciences, Dec., 1844: Lient. Strain's letter to Dr. Morton, respecting Dr. Lund's discoveries. Mémoires de la Soc. Royale des Antiquaires du Nord, 1845-'49, pp. 49-77: Communication from Dr. Lund. Dr. Lund states that the remains examined by him manifested not only the cranial characteristics common to the American and the Mongol, and also those peculiar to the American; but a form of teeth unknown among existing races of men, which, being found alike in young and old, he believed to be natural, although resembling a conformation noticed among Egyptian mummies, and ascribed to attrition. On this point Dr. Morton refrains from expressing an opinion for want of opportunities of personal observation.

Dr. Lund declares his belief that South America was inhabited, not only in remote historical times, but also probably in the geological eras, as many species of animals seem to have disappeared since the existence of man in this hemisphere; and that the race of men occupying this part of the world in ages the most remote, was, as to its general type, the same that was found by European discoverers. He remarks, that the cranial conformation of the Americans, similar but inferior to that of the Mongols, has led to the supposition that the former were Mongolians who had degenerated as a result of emigration; but that this opinion is opposed by the fact that no indication of an ancient superior development is found. Moreover, if we consider that nature habitually advances from the imperfect to the perfect, that this part of the world is, according to geological evidence, of a date anterior to what is commonly called the Old World, and that an examination of the caves referred to leads to an admission of the antiquity of its original inhabitants, while the primitive type has continued without change, there is good reason, he thinks, to entertain an opinion the reverse of that which would establish a relation between the Mongolian and American races. He mentions, in a note, that the interior plateau of Brazil is composed of horizontal strata of the transition period, which are nowhere covered with the secondary or tertiary formations; which proves that the New World was elevated above the sea before the secondary period, so as to form an extensive continent. No part of the Old World, to his knowledge, presented the same phenomenon to such an extent that an equal antiquity could be attributed to it.

“Respecting the fossil remains of the human body I possess from Florida, I can only state that the identity with human bones is beyond all question; the parts preserved being the *jaws with perfect teeth*, and portions of a foot. They were discovered by my friend, Count F. D. Portales, in a bluff upon the shores of Lake Munroe, in Florida. The mass in which they were found, is a conglomerate of rotten coral-reef limestone and shells, mostly *Ampullarias* of the same species now found in St. John River, which drains Lake Monroe. The question of their age is more difficult to answer. To understand it fully, it must be remembered that the whole peninsula of Florida has been formed by the successive growth of coral reefs, added concentrically from north to south to those first formed, and the accumulation between them of decomposed corals and fragments of shells; the corals prevailing in some parts, as in the everglades, and in others the shells, as about St. Augustine and Cape Sable. Upon this marine limestone formation, and its inequalities, fresh-water lakes have been collected, inhabited by animals, the species of which are now still in existence, as are, also, along the shores, the marine animals, remains of which may be found in the coral formation. To this lacustrine formation belongs the conglomerate containing the human bones mentioned above; and it is more than I can do to establish, with precision, the date of its deposition. This, however, is certain, that Upper Florida, as far south as the head-waters of the St. John, constituted already a prominent peninsula before Lake Okeechobee was formed; and that the whole of the southern extremity of Florida extends for more than three degrees of latitude south of the fresh-water system of the northern part of the peninsula.

“If we assume that rate of growth to be one foot in a century, from a depth of seventy-five feet, and that every successive reef has added ten miles of extent to the peninsula (which assumption is doubling the rate of increase furnished by the evidence we now have of the additions forming upon the reef and keys south of the main land), it would require 135,000 years to form the southern half of the peninsula.

“Now, assuming further, which would be granting by far too much, that the surface of the northern half of the peninsula, already formed, continued for nine tenths of that time a desert waste, upon which the fresh waters began to accumulate before the fossiliferous conglomerate could be formed (though we have no right to assume that it stood so for any great length of time), there would still remain 10,000 years during which, it should be admitted, that the mainland was inhabited by man and the land and fresh-water animals, vestiges of which have been buried in the deposits formed by the fresh waters covering parts of its surface. So much for the probable age of our conglomerate.”¹

Dr. Usher says the phenomena of geology “establish not only that South America was inhabited by an ancient people long before the discovery of the new continent, or that the population of this part of the world must have preceded all historical notice of their existence—they demonstrate that aboriginal man in

¹ For a general account of bones of man among organic remains, see *Smith's Nat. Hist. of the Human Species*, pp. 93–110.

America antedates the Mississippi alluvia, because his bones are fossilized; and that he can even boast of a geological antiquity, because numerous species of animals have been blotted from creation since American humanity's first appearance. The form of the crania, moreover, proves that the general *type* of races inhabiting America at that inconceivably remote era was the same which prevailed at the period of the Columbian discovery; and this consideration may spare science the trouble of any further speculation on the modes through which the New World became peopled by immigration from the Old."

In the chapter on the comparative anatomy of races, Dr. Nott maintains that the distinctions between the Americans and the Polynesians are marked and decisive; that, with perhaps some very partial exceptions along the Pacific coast, the types of America are entirely distinct from those of Oceanica; and that American languages, civilization, social institutions, &c., are utterly opposed to Oceanic influence. "It is," he says, "from the so-called Polynesian and Malay races, that many writers have derived the population of America; yet in no two types of man do we find cranial characters more widely different." * * * "The American heads differ more widely from all Oceanic crania than they do even from those of the Chinese, or true Mongol races. The Oceanic races, including even the Sandwich Islanders, when compared with our Indians, exhibit crania more elongated, more compressed laterally, less prominent at the vertex, and more prognathous in type. American races are strongly distinguished by the reverse of all these points, in addition to their own greatly flattened occiput."

The suggestions, speculations, and opinions, collected in the volume now under notice, had, for the most part, been previously advanced in some less connected and more incidental shape—in lectures, in papers communicated to learned societies, in essays, prefaces, and casual discussions, but had not been deliberately applied in this country to the construction of an entire ethnological system.

In whatever form the views there combined have heretofore found expression, they have been earnestly opposed in the United States, as elsewhere, by those who have deemed them unsound and objectionable. They are to be regarded as individual sentiments, which, as elements of opinion, are entitled to a place with other materials out of which theories relating to our subject have arisen.

The late Dr. Samuel Forrey, of New York, published in the *American Biblical Repository* of July, 1843, an elaborate essay, entitled "Unity of the Human Race confirmed by the Natural History of the American Aborigines." From this we have desired to select salient passages that might be set against those which have been quoted of an opposite bearing; but the subject is treated in a manner that is unfavorable to such a purpose. The investigation is not a technically scientific one, nor does it aim to add to the existing materials of opinion. Receiving Dr. Morton's statements of facts, but rejecting his inferences, Dr. Forrey's design was to show that the former do not necessarily conflict with the reasoning of Prichard, Lawrence, and other naturalists, who believe in the singleness of human origin. He gives a list of authors on the natural history of man, and of writers on Ameri-

can antiquities, whose works he had carefully studied in reference to his subject, and states his proposition thus: "What we propose to demonstrate is, that revelation and science are both beams of light emitted from the same Sun of Eternal Truth. As truth can never be in opposition to truth, so it has been found that many investigations into the laws of natural science, which were thought at first to conflict with Holy Writ, have been discovered in the end, as will be shown in this inquiry into the *unity of the human family*, to afford confirmation and elucidation of its divine truths."

He maintains that there is nothing in the position of America that forbids the supposition of an exotic origin of its primitive inhabitants, and that Morton's conclusion that there are no direct or obvious links between the people of the Old World and the New, can be successfully refuted. In his argument it is not claimed that his facts are new, or the views original. They are mainly derived from the great authorities upon human history, in whose larger field of reasoning the inquirer can seek a solution of the doubts which partial or local observations may engender. "Any one," says Dr. Forrey, "who allows himself to speculate upon this subject, will, at first view, be inclined to adopt the opinion, that every part of the world had originally its indigenous inhabitants—*autochthones*—adapted to its physical circumstances. By this hypothesis a ready solution is afforded of some of the most difficult questions presented in the investigation of the physical history of mankind. * * But many of these obscurities will be made to disappear before the light of science, like mist before the morning sun; thus reconciling, in many points, science and revelation." We believe Dr. Forrey first introduced, in this connection, that striking illustration of the tendency of physical organization to modify its characters in conformity to external circumstances which is found in the fact that fishes, in the sunless waters of the Mammoth Cave, have no eyes.

The archæological conclusions of his essay are, that all our aborigines, with the exception, perhaps, of the Eskimaux, have the same origin; that the emigration of the Eskimaux tribes is of comparatively recent date, while the arrival of what is considered an aboriginal race dates back to the earliest ages of mankind, and cannot be said to be derived from any nation, or variety of mankind, now existing; but it is assimilated by so many analogies to the most ancient type of civilization in the eastern hemisphere, that the character of its civilization cannot be regarded as wholly indigenous.¹

In 1850, public attention was particularly drawn to these questions, not only by reviews and debates at scientific meetings, but by more elaborate efforts to meet and overcome whatever objections had been started to the commonly received doctrine of human descent. The treatises of Drs. Bachman and Smyth, having imme-

¹ A brief article by Dr. Forrey, under the title of "Considerations on the Distinctive Characteristics of the American Aboriginal Tribes" is inserted in Vol. IV of Mr. Schoolcraft's general work. The American *variety* is there regarded as having a relation to the Caucasian and Mongolian, as the Malay variety has a relation to the Caucasian and the Ethiopian, they being merely intervening shades of those leading types.

diat reference to the conclusions of Morton and Agassiz, appeared in that year.¹ They both emanated from Charleston, South Carolina, a city which has been distinguished for the attention given to natural science by its literary men, and in some branches (that of herpetology, for example), has taken the lead in this country. Dr. Bachman's argument is based, to a great extent, upon his personal observations and researches as a naturalist; whilst that of Dr. Smyth is chiefly historical and theological. Neither of them alludes, except incidentally, to the origin of American population, and they do not profess to have given special attention to that inquiry.

Dr. Bachman, however, places his private observations in opposition to Dr. Morton's belief of a physical diversity between the Americans and the Mongolians. He says: "The early writers on the history of the aboriginal races of America, were of opinion that these people descended from the Mongols on the north of the eastern continent, and others that they originated from the Malays of the Indian Archipelago. The writings of Dr. Morton, however, appear to have silenced, for a time, the advocates of the old theory.*** The opinions of an intelligent naturalist, possessing so many materials to direct his judgment, are entitled to much weight on a subject with which he has long been familiar. We readily admit that in this he possesses superior claims on public confidence, and it would, therefore, appear presumptuous in us to express a contrary opinion. We regard this, however, as still an open question; and, as all men are entitled to an honest expression of their views, so long as they are not injurious to public or private interests, we will proceed without entering into a discussion which, if fully treated, would occupy a volume, to express the grounds of our conviction, that when this whole subject is more fully investigated, it will yet be discovered that the original theory, which at present seems to have few advocates, will, notwithstanding the many erroneous speculations on which it was founded, prove to a considerable extent correct. Nor do we express this opinion hastily, or without due deliberation founded on personal and minute examinations. Opportunities have been afforded us of seeing many individuals in every Indian tribe that existed within the last forty years, in all our Atlantic States, from the Canadas to South Florida. We have never had an opportunity of seeing the Eskimaux, and possess no further knowledge of that race than from the skulls and the many portraits with which the public is familiar; we have not visited Florida, and our only knowledge of those tribes is derived from an examination of the prisoners brought to Sullivan's Island during the late Florida war; but with all the intermediate Atlantic tribes we became acquainted, studied their forms, features, and habits of life, and at one period spent three months in their villages. On the eastern continent we possessed opportunities of examining several individuals from all but one of the families regarded by Professor Morton

¹ The Doctrine of the Unity of the Human Race, examined on the Principles of Science. By John Bachman, D.D., Charleston, S. C. 1850.

The Unity of the Human Races proved to be the doctrine of Scripture, Reason, and Science, with a review of the present position and theory of Professor Agassiz. By the Rev. Thomas Smyth, D.D. New York, 1850.

as belonging to the Mongolian race, viz: the Mongol Tartars, Turkish, Chinese, and Indo-Chinese families. We saw no individuals of the Polar family. Although we did not examine these races of men in regard to the question of unity or plurality of their origin, we were anxious to render ourselves familiar with the different varieties. We became satisfied that the characters so confidently insisted on as pervading all the ramifications of the great Mongolian stock are far from being uniform or permanent in all the varieties of the Mongolian family. In a crew of thirteen Chinese, which we examined at Liverpool, all represented to us by gentlemen who had resided in China, as of unmixed blood, there were only three who possessed any claims to the oblique eye, so generally represented as characteristic of this nation. Among a crew of Japanese, which we examined in London, we sought in vain for the striking peculiarity spoken of by Thunberg, who says, 'the eyelids form in the great angle of the eye a deep furrow, which makes the Japanese look as if they were sharp-sighted.' An impression was left on our minds that several peculiarities ascribed as the invariable characteristics of the Mongolian race were confined to the races existing in the Polar regions, and that the causes might yet be traced to the snow-clad regions which they inhabited. The color was not as uniformly yellow as has been represented, nor have we found that the red man of America is always entitled to the latter appellation. We saw a considerable number of individuals who belonged to several of the Mongolian families on the eastern continent, whom, if we had met with them in America, we should immediately have classed with some of the tribes of our now dispersed and almost extinct aborigines. We observed the same high cheek bones, the same very straight hair with scarcely a tendency to curl, the same beardless face, so very striking and peculiar in every branch of the Mongolian family; a few partial exceptions exist in both countries, but we observed at least as much beard in two of the Japanese as we ever witnessed on the face of an American Indian. We could add many other resemblances in countenance, language, and modes of life, but our only object in this place is to draw the attention of naturalists again to a subject which, we believe, when properly investigated, will once more direct the current of opinion into the original, but now apparently choked-up channel.

"From all the observations we were enabled to make, we have been led to the firm conviction that the descendants of what is called the Mongolian race, are found in a variety of forms and shades of color in America, from Greenland on one side, and Kamtschatka on the other, in the arctic circle, through the Russian settlements and Oregon, down to California in the west; and through the Canadas and the Atlantic United States on the east, down to the southern point of Florida, on the very borders of the tropics; that with occasional admixture of the Malays, which appear to predominate in many tribes of California, Mexico, and South America, and an admixture of the negro in some of the Florida and Cherokee tribes, the same race, with many variations, may be traced through the whole range of the American continent, down to Patagonia and Tierra del Fuego."¹

¹ Doctrine of the Unity of the Human Race, pp. 268-272.

It is admitted by Dr. Bachman, that every species of animal and plant has its central birth-place, from which it spreads to certain limits, where it ceases to exist, unless removed to other localities by artificial means.

It is also claimed that the native plants, animals, and insects of America, are all of species distinct from those of the other hemisphere, except where the continents approach one another at the north; and the constitutional adaptation of *man* to every part of the world is attributed to superiority of organization.¹

If naturalists shall be found to agree in considering the zoology and botany of America as distinct from those of all other countries, and indigenous to the soil, a branch of archæological inquiry, originally deemed a troublesome one, will be disposed of, viz: that relating to the manner in which the inferior orders of creation reached this continent.

Dr. Bachman still pursues the discussion with unwearied industry. In addition to articles in the *Charleston Medical Journal*, he has lately printed an examination of the theories in natural history of Professor Agassiz, and has announced that he is preparing for publication, a work on the skulls, the general anatomy, the color of the skin, and the nature of the hair of the varieties that compose the human family.²

Dr. Smyth's work may, in some respects, be regarded as an appendix to that of Dr. Bachman, on which it leans for many of its arguments and illustrations, and whose conclusions it follows in reference to the sources of American population.

The influence of the American climate in modifying the physical character of its inhabitants is a point of considerable importance in estimating the possible sources of their origin. One of the most celebrated ethnological treatises which this country has produced, that of President Smith, of Princeton College, was based upon the doctrine of climatic influences. Although adopting the prevalent opinion that the Malays, or Tartars, colonized America, and founded the semi-civilized empires existing at the time of the discovery by Columbus, this author believed it could be shown that a change had already begun to take place in the Anglo-Saxon and other European inhabitants, both in complexion and feature; and that, in the Southern States at least, if the people were thrown like the Indians into a state of absolute "savagism," they would, in no great length of time, be perfectly marked with the same complexion.³

This supposition better accords with the views of Blumenbach, Buffon, and Zimmerman, than with those of most phisologists of a later date. Lawrence and Prichard agree in deciding that the effects of climate and of *habits of life*, &c., are not transmitted from parent to child;⁴ and President Smith's general theory has not

¹ Doctrine of the Unity of the Human Species, pp. 250, 266.

² Charleston Med. Journ. of July, 1855.

³ Essay on the Causes of the Variety of Complexion and Figure in the Human Species, &c. By Samuel Stanhope Smith, D. D. Edinb., 1788.

⁴ "In all changes which are produced in the bodies of animals by the action of external causes, the effect terminates in the individual; the offspring is not in the slightest degree modified by them."—*Lawrence's Lectures*, p. 436.

"Nothing," says Dr. Prichard, "seems to hold true more generally than that all acquired conditions

found favor with the principal American writers who have subsequently treated of the same or kindred subjects. It was severely criticized by Dr. Caldwell, in the *American Review* of July, 1811, soon after a second edition of the Essay was printed; and more at length in the *Portfolio*, Vol. IV, 1814, by the same writer, who endeavored to show that we are acquainted with no cause, short of the power that first created man, capable of producing "that striking difference which exists between the African and the European, the American Indian and the Hindoo, the Patagonian and the Laplander."

Following up the subject in after years, Dr. Caldwell published a small volume, in which he took more decided ground in favor of a distinct origin for different races; regarding our Indians as fitted and intended to inhabit uncultivated forests, and wild prairies, and destined to disappear, as these are converted into fruitful fields, on the same principle of adaptation that called them into existence.¹

Kinmont,—who resorted to the hypothesis of an innate tendency in man to give rise, in the progress of generations, to several distinct races, which, separating under Providential influences, were led to distinct quarters of the earth,—remarks in his lectures: "To say that all mankind originally perfectly resembled each other, and that the several natural varieties which now exist have arisen out of local circumstances—the action of external causes—is to adopt a gratuitous explanation, which cannot be shown to have any foundation in fact. To say that the different races have sprung out of separate original pairs, is equally absurd and unsupported."²

With similar positiveness it is declared by Van Amringe, that "the differences in the races of men cannot be accounted for by climate, mode of living, or any natural causes now in operation, or which have been in operation within the period of history." He is equally confident that they cannot be explained by the supposition of accidental or congenital varieties springing up in the human family. This American author has sought to establish a new system of human history and philosophy. He regards the zoological classification of man by his animal properties, excluding his *psychical* attributes, as unphilosophical, on the ground that there is no analogy between man and animals which can assist us to classify man, or to understand his history. He assumes that there are at least four distinct species of men, proved by their physical and psychical properties and powers, but a single original centre of distribution, or creation of man, in the neighborhood of the Euphrates; while of animals and vegetables there were several centres of distribution or creation. He considers that specific differences among the races of men are established by the principles of Zoology, and by Anatomy, Physiology, Psychology, and the natural law of sexual love; and proposes a new classification and

of body, whether produced by art or accident, end with the life of the individual in whom they are produced."—*Ibid.*, quoting *Prichard's Disp. Inaug.*

¹ Thoughts on the Original Unity of the Human Race. By Charles Caldwell, M.D. Phila., 1831; second edition, with additions. Cincinnati, 1852.

² Twelve Lectures on the Natural History of Man, &c. By Alexander Kinmont. Cincinnati, 1839.

nomenclature, adapted to his own compounded physical and psychical theory.¹ And finally, Dr. Bachman disavows the doctrines of Smith in these terms: "While we are willing to allow some weight to the argument of President Smith, who endeavors to account for the varieties of man from the combined influence of three causes—'climate, the state of society, and manner of living;' we are free to admit that it is impossible to account for the varieties in the human family from the causes which he has assigned."²

That all forms of life in this country were wanting in vigor, and generally inferior to those of the eastern continent, was maintained by Buffon, De Pauw, and the Abbé Raynal, and partially adopted by Robertson. It was indignantly repelled by Jefferson, and is termed by Morton "an idle theory," and an hypothesis of "closet naturalists," which there is ample evidence to disprove. An explanation of the assumed fact was sought by its supporters in the supposition that this continent emerged from the water at a later period than the other, and had not recovered from the effect of cold and moisture, which exerted an enervating influence upon the inhabitants, whose resemblance and uniformity showed them to be more recent than the people of the other hemisphere, and that time had not been afforded them to become as robust as the latter.

In curious contrast with these persuasions of the older school of European philosophers, we have now the conviction of Dr. Lund, already cited, and of other eminent geologists, that land in America must have emerged earlier than any known portion of the so-called Old World; and the conclusions of Dr. Martius that the natives of the New World are not in a state of primitive barbarism, but are the last remains of a people once high in the scale of civilization and improvement; but now worn out and perishing. Prichard, after testifying to the learning and ability of Martius, and to the ample resources possessed by him for acquiring an accurate knowledge of the American aborigines, avers that the structure of the American languages, and the national customs and institutions, indicate habits of thought and reflection, and cultivation of mind, very different from the state of savages in general; declaring, also, that attentive observers have been struck with manifestations of greater energy and mental vigor, of more intense and deeper feeling, of a more reflective mind, of greater fortitude, and more consistent perseverance in enterprises, and all pursuits, when they have compared the natives of

¹ An Investigation of the Theories of the Natural History of Man, by Lawrence, Prichard, and others, founded on Human Analogies; and an outline of a new Natural History of Man, founded upon History, Anatomy, Physiology, and Human Analogies. By William Frederick Van Amringe. New York, 1848.

Mr. Van Amringe's classification recognizes four species, viz: the *SHÆMITIC*, comprehending the Israelites, Greeks, Romans, Teutones, Slavons, and Celts; the *JAPHETIC*, comprising the Chinese, Mongolians, Japanese, Chin Indians, and probably the *Eskimaux*, *Toltecs*, *Aztecs*, and *Peruvians*; the *ISHMAELITIC*, comprising most of the Tartar and Arabian tribes, and *the whole of the American Indians*, unless those mentioned in the second species should be excepted; the *CANAANITIC*, comprising the Negroes of Central Africa, Hottentots, Caffirs, Australasian Negroes, and probably the Malays.—P. 73.

² Doctrine of the Unity of the Human Race, &c., p. 177.

the New World, with the sensual, volatile, and almost animalized savages, who are still to be found in some quarters of the Old World.¹

On the other hand, according to Professor Guyot, it is vegetable life alone that receives a favorable development under the moist and warm influences of the American climate. In both the southern and the northern continents, "this luxuriant vegetation, it might be said, seems to stifle the higher life in the animal world. Animal life is, as it were, overruled, enfeebled; it does not occupy here the first rank, which is its due." "Among the superior animals, development seems to be arrested; it is incomplete;" and, with the exception of some superior types in North America, "they have not the strength nor the indomitable courage, nor the ferocity, nor the intelligence, of the similar creatures of the Old World." He pronounces that "man himself, the indigenous man, bears in his whole character the ineffaceable stamp of this peculiarly vegetative nature." "His lymphatic temperament betrays the preponderance in his nature of the vegetative element." "If he sometimes exhibits a display of prodigious muscular force, he is yet without endurance." "The conformation and position of the New World give to it a hot and watery climate; this impresses its own character on all the organized creation."²

Instead of perceiving any analogy between the laws that govern the animal and vegetable kingdoms, and control their distribution, and those that affect mankind, Professor Guyot finds a decided opposition in the two. "There is," he says, "a particular law which presides over the distribution of the human races, and of civilized communities taken at their cradles; a different law from that which governs the distribution of plants and animals."³

If we may believe Dr. Knox, this climate, which so depresses the energies of the red man, is positively destructive to the European. He maintains that climate has no permanent influence in altering the races of man, but may and does destroy them; that the Saxon decays in Northern America; and were the supplies from Europe not incessant, he could not stand his ground in these new countries; that already the United States man differs in appearance from the European. Not that this indicates the conversion of the Anglo-Saxon into the red Indian, but is a warning that the climate was not made for him, nor he for the climate.⁴

If climate has power to change not only the complexion, but the bony structure of man, the form of his skull, the cast of his features, and the model of his frame, and if association among different races, without intermixture, tends to produce similarity of appearance, all arguments against the European or Asiatic origin of the American Indians, derived from their peculiar physiological conformation are deprived of their force; for, however various the sources, from which they might have sprung, they would become moulded, according to that theory, into uniformity, by a natural proclivity incident to this hemisphere.

A doctrine similar to that of President Smith is advanced by Dr. Carpenter as

¹ Nat. Hist. of Man, II, 497, 501.

² The Earth and Man. By Arnold Guyot: Boston, 1850. Lecture VIII.

³ The Earth and Man. Lecture VII.

⁴ The Races of Men: a fragment. By Robert Knox, M. D.; Philad. ed., pp. 44 and 57.

an independent conclusion of his own. The following rather startling passage is from his essay on the varieties of mankind :—

“It has not been pointed out, so far as the writer is aware, by any ethnologist, that the conformation of the cranium seems to have undergone a certain amount of alteration, even in the Anglo-Saxon race of the United States, which assimilates it, in some degree, to that of the aboriginal inhabitants. Certain it is, that among New Englanders more particularly, a cast of countenance prevails, which usually renders it easy for any one familiar with it, to point out an individual of that country in the midst of an assemblage of Englishmen; and though this may chiefly depend upon the conformation of the soft parts, yet there is a certain sharpness, and an angularity of feature, about a genuine ‘yankee,’ which would probably display itself in the contour of the bones. So far as the writer’s observation has extended, there is especially to be noticed an excess of breadth between the rami of the lower jaw, giving to the lower part of the face a peculiar squareness that is in striking contrast with the tendency to an oval narrowing which is most common among the inhabitants of the ‘old country.’ *And it is not a little significant, that the well marked change which has thus shown itself in the course of a very few generations, should tend to assimilate the Anglo-American race to the aborigines of the country; the peculiar physiognomy here adverted to, most assuredly presenting a transition, however slight, toward that of the North American Indian.*”¹

As an example of the influence of association, the same writer states that, according to the concurrent testimony of disinterested observers, both in the West Indies and the United States, an approximation in the negro physiognomy to the European model is progressively taking place in instances where, although there has been no intermixture of blood, the influence of a higher civilization has been exercised for a lengthened period. He cites Dr. Hancock, as a most intelligent physician of Guiana, who asserts that it is frequently not at all difficult to distinguish a negro of pure blood belonging to the Dutch portion of the colony, from another belonging to the English settlements, by the correspondence between their features and expression, and those which are characteristic of their respective masters. Sir Charles Lyell is also referred to as having informed Dr. Carpenter that he had been assured by numerous medical men in the slave States of the North American Union, that a gradual approximation is taking place in the configuration of the head and body of the pure negro to the European model.²

With the cases of assimilation last adduced, climate has of course nothing to do. They would probably be ascribed to the influence of mental habits and associations upon the muscles of expression, gradually extending to the more inflexible parts of the system, as husband and wife are said to grow into a sort of resemblance, and persons of a particular trade acquire an aspect that distinguishes them; or as the favorite dog of the “Ettrick Shepherd” was humorously said to have gained such a likeness to his master as sometimes to occupy his place in the pew at church, without the minister’s ever noting the difference.

¹ Carpenter on the Varieties of Mankind, in Todd’s Cyc. of Anat. and Physiol., p. 1330.

² Ibid., p. 1330.

A recent contributor to the *Protestant Episcopal Quarterly Review*, published in New York, gives his countenance to the idea, that the Anglo-American is gradually assuming the physical type of the aborigines, and seems to regard the tendency as varying according to the special influence of particular localities. Thus, he believes that the New Englander is acquiring the craniological formation of the family of tribes to whom he has succeeded as possessor of the soil, whose skulls differed somewhat from those of the Indians in general.¹

In referring to the various aspects which archæological science, as applied to this country, has from time to time presented, the endeavor has been to maintain the order of progression so far as practicable, while regarding also the natural connection of different theories, and their bearing upon one another.

Advancing from that stage of opinion when the necessity of looking abroad for the origin of our primitive population was almost universally acknowledged, and when the belief prevailed that physical, moral, and traditionary evidence pointed to Asia as the principal source whence that population was derived, we entered upon one in which another class of sentiments predominated. In this, the deductions from an analysis of dialects, the results of physiological and palæontological investigations, and the conclusions of men of science respecting a radical diversity of races, were combined to favor the hypothesis of an independent and indigenous creation of man in America. We have now come out upon a conjunction of theories, claiming a scientific foundation, from which a new series of inferences may be drawn.

Agassiz and Guyot mutually recognize a peculiar homogeneity in the geological structure of the American continent, from which a like homogeneity might be expected to exist, or to be produced in its animal and vegetable kingdoms severally, such as observation has shown to be the case.

Professor Guyot has superadded the conception that vegetative life is here universally paramount over animal vitality, absorbing the elements of growth and vigor, and affecting the development not only of inferior orders, but of the primitive man, whose nature, inert and passive, is held to be deficient in those mental and corporeal energies which have marked and diversified the history of his race in other lands.

Moreover, aside from the deteriorating influence ascribed to the climate, it is alleged, as has been seen, that it possesses the quality of changing the physical, and, as a consequence, the mental characters, of other varieties of man, into those which distinguish the families that constitute the American division.

And while the tendency to this metamorphosis has, by one authority, been considered stronger in the Southern States, others declare it to be now in gradual but perceptible progress among the Anglo-Saxons of New England.

Thus, if the argument rested on these physical propositions alone, all the nations of the earth might, at some former period, have contributed to the population of the western hemisphere, as they are doing now, and in process of time all traces of distinction would have become obliterated in a common and irresistible degeneracy.

¹ Prot. Episc. Rev., July, 1855, p. 380.

A prospective consequence of a similar kind would seem to follow from the same premises, unless it is presumed that the immense and continuous immigration of superior races, which has succeeded to the discovery by Columbus, will keep in check the operations of nature until exhalations from the soil are modified by culture, and other unfavorable conditions are overcome by the arts and habits of civilized life.¹

Here, then, are three distinct modes of reasoning upon the problems of American archaeology; the first resting mainly upon historical intimations and superficial affinities of person, habits, and arts; the second based upon philological, physiological, and geological phenomena; the third dependent on a theory of climatic and geographical agencies. By the first, a direct, and not very distant relationship, between Asiatic and American races, is maintained; by the second, either an entire separation from the rest of mankind, or a connection so remote as to be beyond the limits of recorded events, has been supposed to be indicated; by the third, from whatever source or sources, the population of the country has originated, it has been subjected, as alleged, to physical influences here, destructive of all external means of identification.

Happily our task is to record, not to reconcile opinions. It would be as easy to give unity and consistency to a picture made up of sketches taken from different stand-points, under different lights, and at various degrees of perspective, as to project a congruous scheme of ethnology out of materials that writers have collected from different points of observation, often for contrary purposes, and affected by the coloring of opposite prejudices.

Dr. Bachman's conviction that the original theory which designated the Mongols and Malays as the principal sources of primitive population in America, silenced, as he supposed, for a time, by the doctrines of Morton, would ultimately prove correct, is fortified by the judgment of many writers of authority.

Dr. Pickering, and Col. Smith, whose opportunities for comparison have been highly favorable and extensive, both dissent from Dr. Morton's conclusions. The first, while a member of the U. S. Exploring Expedition, examined the natives on the American coasts in nearly every latitude, and included in his general survey, nearly every variety of the human race.² The other claims to have personally compared, and drawn from life, many individuals of different tribes, from Canada to the extremity of the southern continent.³

¹ Dr. Knox does not appear disposed to admit even this possibility, but anticipates the ultimate decadence of the European stock, if not the ultimate restoration of the native race, should the latter escape annihilation in the mean time. He holds that the probable result is exemplified by the condition of the Spanish American provinces, where, since immigration from the parent country has ceased, the Spanish race has progressively declined, while the descendants of the original inhabitants are gaining in numbers, so that in another century, unless both are destroyed by the Anglo-Saxon, their blood will predominate, and the Castilian be all but extinct. A permanent amalgamation of races, even of those most nearly allied, and the permanent duration of any race in an uncongenial climate, he regards as equally impossible.

² *The Races of Men, and their Geographical Distribution.* By Charles Pickering, M. D. 1848.

³ *The Nat. Hist. of the Human Species.* By Lieut.-Col. Charles Hamilton Smith, K. H. 1848.

Dr. Pickering's *map*, prepared to exhibit his view of the distribution of the races of men, assigns the whole of the two continents of America to the Mongols, excepting a portion of the western coast of North America, and some islands of the Gulf of Mexico, which he yields to the Malays. In the text of his work he mentions the possibility that the Malay race is more widely extended than is represented in the map; and he is disposed to attribute to that race whatever is authentic in the accounts of "*black aboriginals*," as geographical considerations render it improbable that any *third* race had reached America prior to the European discovery.¹

At San Francisco, where there were many Polynesians, he found it difficult to distinguish them from the natives of California; the only perceptible difference being in the hair, which among the islanders was wavy or curled, while that of the Californians was uniformly straight. The manufactures, habits, and customs of the latter, in his estimation, notwithstanding "a strong American impress," bore equal indications of Polynesian affinity. He remarks that, while to persons living around the Atlantic shores, the source of aboriginal population seems mysterious, had writers upon the subject made a voyage to the north Pacific, much of the discussion would, in his opinion, have been spared; as it was only on visiting that part of the world, that the whole of the matter seemed to open to his view. For while the facilities of transit along the northern coast of the Pacific, by means of land-locked passages are, perhaps, unparalleled, the climate is genial for the latitude, and the means of subsistence are abundant. In the chain of population he found no break. He also regarded the Polynesian groups and Japan as favorably situated for communication with California, notwithstanding their distance, on account of the winds and currents that tend from them to the latter; exemplified, in the case of Japan, by the chance arrival of tempest-tost junks on our northwest coast.²

The circumstances adduced in support of the common idea that the Aztecs came from the direction of Oregon, such as the terminal "tl" so characteristic of the Mexican language, and found also among the Chinooks and Nootkas, with other resemblances, in costume, modes of dressing the hair, forms of sculptured pipes, &c., are sustained by his testimony; and, in addition to these direct references of original population to particular exotic sources, he advances the scientific opinion that "it could be shown, on zoological grounds alone, that the human family is foreign to the American continent.

Col. Smith considers the decay of the American races, amounting to prospective extinction, a proof that they are not a *typical* people, but are stems, such as are alone liable to annihilation. He holds that there exist sufficient coincidences of manners, practices and language, between the natives of this continent and those of eastern Asia, to overthrow the hypothesis of an exclusively aboriginal species

¹ Yet, in another passage, he speaks of having met, in a few instances, in the United States, with a race which was neither Mongolian nor Malay, and which he terms "the Telingan or true Indian." P. 281, Bohn's ed.

² See, in this connection, Humboldt's "matured opinions," *Views of Nature*. Bohn's ed., 1850, pp. 131-3.

of man in America, unless the "*Flathead* type" may be considered an exception. The primitive flatheads, if not constituting a distinct species of man, were, he imagines, "at least the oldest and first wanderers that reached the American continent." In his judgment, an immigration, continuous for ages, from the east of Asia, is indicated by the traditional pressure of nations from the northwest coast, eastward and southward.

Regarding the flatheaded Paltas, and Aturians, or primeval race of South America, as anomalous, though evidently mixed with tribes whose origin is more marked, and admitting that some of them, such as the, so-called, Frog Indians, are still in being about the east side of the Cordilleras, he states that the stock has in fact been supplanted for ages by other nations, whose Malay aspect countenances the supposition of their original arrival from the islands of the Pacific. The tribes on the Sacramento River he derives from the Sandwich Islands; and he thinks that Polynesians, from the direction of the winds and currents, could hardly fail to reach the coast of Chili, whence they might mix with the Brazilian tribes, and form the race of Araucas.

That abnormal configuration of the skull, commonly expressed by the term *flat-head*, is undoubtedly the most remarkable phenomenon connected with the human physiology of these continents. The regions of country where its existence has been noted, the extent to which it prevailed, and the evidences of honor and reverence with which it appears to have been associated, from a period of unknown antiquity, render it an object not only of anatomical interest, but of striking historical significance.

From Lake Titicaca, the original seat of the oldest, and perhaps the highest forms of Peruvian civilization,¹ the practice of moulding the head by compression in infancy, has been traced among the Caribs of the continent and islands; in Central America, Mexico, and Yucatan; and along the southern shores of the United States, from the Mississippi River to the Atlantic Ocean; and it appears again among the tribes of the northwest coast, from Columbia River nearly to the 54th degree of latitude. Thus, in the United States, the Attacapas, the Natchez, the Choctaws, the Waxsaws, the Creeks, and the Catawbas, are known to have had the usage among them; but from these it is necessary to pass the Rocky Mountains and approach the Arctic regions, before meeting with it again. The custom was prohibited in Peru, by an ecclesiastical decree, as early as 1585, and was abandoned where the authority of the Spaniards could be enforced; and with the breaking up of native communities, and the decay of the race, it has generally ceased in both continents; but in Oregon it still continues, as essential to the holding of office or rank in the tribes that make use of it, while it is forbidden to those who are in bondage.

A like distinction and social supremacy appears to have attended this strange disfigurement wherever it has been noticed. In Peru, its possessors were interred with the most costly rites, in the largest and finest tombs; and in the sculptures

¹ Prescott's Conquest of Peru, I, 12.

and hieroglyphic memorials of the Mexican provinces they occupy the position of conquerors and divinities. Hence the association of dignity and conventional beauty with a configuration so unseemly has been ascribed to traditional veneration for the dominant power and intellectual superiority of a race with whom the deformity was congenital. Whether such a race ever existed, is a question now at issue among naturalists.

Baron Humboldt and M. Bonpland are believed to be the first who made this anomaly a subject of scientific investigation. The extraordinary configuration, exhibited by the skulls deposited by them in the Museum of Natural History at Paris, was to be found, according to their testimony, among nations to whom the means of producing artificial deformity were totally unknown. Dr. Morton having adopted this view in his *Crania Americana*, regarded the cranial conformation indicated by the specimens referred to as characteristic of a primitive type of the American man. Subsequently, he became convinced that, at least in its excessive forms, it was always the result of mechanical pressure.¹

Dr. Nott, the friend and commentator of Morton, suggests, as a mode of reconciling these different conclusions, that they arose from an examination of "contradictory materials;" while he himself receives the doctrine of the former existence of an autochthonous race to whom the deformity was natural—a fact which he deems to be established by Dr. Lund's discoveries of fossil crania, as described by Lieut. Strain, and by the developments of Rivero and Von Tschudi.²

It is proper, however, to state that Dr. Morton had before him all the means of forming a judgment that are referred to by Dr. Nott, except the *Peruvian Antiquities* of Rivero and Von Tschudi. Lieut. Strain's account was in the form of a letter addressed to him. In the Essay on the Primitive Type of the American Indians, which Morton commenced for Mr. Schoolcraft's work, but left unfinished at his death, he reaffirms the change of opinion that he had avowed ten years before. After mentioning that Pentland, Tiedemann, Tschudi, and Knox deny the application of art in the case of the Peruvian skulls, and attribute their shape to an original and congenital peculiarity, he says that his own views on that point were changed by the acquisition of a very extended series of crania from the Peruvian tombs. "I, at first," he continues, "found it difficult to conceive that the original rounded skull of the Indian could be changed into this fantastic form; and was led to suppose that the latter was an artificial elongation of a head remarkable for its natural length and narrowness. I even supposed that the long-headed Peruvians were a more ancient people than the Inca tribes, and distinguished from them by their cranial configuration. In this opinion I was mistaken. Abundant means of observation and comparison have since convinced me that all these variously formed heads were originally of the same rounded shape."³

¹ See *Ante*, p. 78, n. n.

² *Types of Mankind*, p. 440.

³ Schoolcraft's *Hist. and Prosp., &c.*, II, 326. Dr. Morton began to doubt the correctness of his first opinion before he had seen the work of D'Orbigny, and subsequently announced his "matured conclusions" in connection with the facts he had derived from that distinguished naturalist.—See *Am. Journ. of Science*, XXXVIII, No. 2, 1840, and "*Inquiry into the Distinctive Characteristics of the Aboriginal Race of America*," pp. 40–3.

The shape of head artificially produced has varied in different, and even in the same tribes. Sometimes the bulk of the cranium was thrown backward by pressure in front, the sides being confined to prevent expansion in a lateral direction. This was the common Peruvian form. In other cases, both the forehead and the occiput were compressed, causing the skull to spread laterally. Another form was conical, inclining backwards. The Arrowacks of the larger West India Islands flattened the head downwards, in the direction of the spine; and, in some instances, an irregular constriction occasioned a one-sided effect.

Dr. Morton ascribes his original conclusions to the difficulty of conceiving in what manner the form first mentioned above could be artificially produced from an originally rounded skull; and it was after he had, with the aid of D'Orbigny's suggestions, ascertained how the bandages could be applied for the purpose, that he adopted the theory subsequently retained by him. Other naturalists were probably influenced by the same inability; and it appears to have been on the ground that those forms could not be attributed to pressure, or any external force, that M. Pentland supposed them to be congenital, and that his view was confirmed, as he says, by "Cuvier, Gall, and many other celebrated naturalists and anatomists." Tiedemann's expression is, moreover: "A careful examination of these skulls has convinced me that their peculiar shape cannot be owing to artificial pressure. The great elongation of the face, and the direction of the plane of the occipital bone, are not to be reconciled with this opinion, and therefore we must conclude that the peculiarity of shape depends on a natural conformation." The language of Knox is: "That the Carib and Chinook, and the ancient Macrocephali, fancied that by pressure they could give to the human head what form they chose, is certain enough; but does it follow that they could do so? The form of the head I speak of is peculiar to the race; it may be exaggerated somewhat by such means, but cannot be so produced." Dr. Morton was able to show how it could be and was produced, and therefore he believed it to be always artificial.

But investigations not alluded to by Morton, and of equal authority with those of D'Orbigny, present other and stronger reasons for admitting the natural origin of these deformities. Sir Robert Schomburgk found, near the sources of the Corentyne, a branch of the Orinoco, the remnant of a race called the Maopityans, or Frog Indians, whose heads were flattened by nature; at least he could not learn, by the most minute inquiries, that artificial means were employed. A child was born while he was with them, which he saw within an hour of its birth, that had, he states, all the characteristics of the mother's tribe; "and the flatness of its head, as compared with the heads of other tribes, was very remarkable."¹

The national work on Peruvian antiquities, by Rivero and J. J. Von Tschudi, contains an examination of the question; and, as the result of "the numerous and scrupulously careful observations" of Dr. J. D. Von Tschudi, long a resident in Peru, and of the writers' own private researches, it is affirmed that those physiologists are in error, who suppose that the different phrenological aspects offered by

¹ Journ. of the Royal Geograph. Society of London, XV, pp. 53 and 57.

the Peruvian race were *exclusively* artificial." Such an hypothesis they imagine to have been based solely on the crania of adults; whereas the heads of children of the most tender age, exhibiting no vestige of pressure, were of similar conformation, and the same fact was observable in the case of infants yet unborn, which had been discovered among the mummies. The phenomenon is made more remarkable by the statement that in the crania of these children is found a peculiar bone, or division of the occipital portion of the skull, wanting in all other human beings, and corresponding to the *os interparietalis* of Rodentia and Marsupialia. This anomaly was first brought to notice, by Dr. Franklin Bellamy, an English naturalist, in 1842, and subsequently the bone received, from Dr. J. D. Von Tschudi, the name of "*Os Inca*," in reference to the nation to which it was confined. Messrs. Rivero and J. J. Von Tschudi declare that they can "assert with certainty" that in some departments of Peru remnants of the races whose natural form of head has been imitated by compression may still be found, as they have themselves had occasion to see.¹

We are not aware that such cranial deformity has been supposed to have ever existed naturally anywhere in the United States; and if the source from whence the practice was derived as an imitation could be determined, it might be the means of solving important archæological propositions.

The inquiry arises, whether these peculiarities, let them be natural or artificial, must have been indigenous to the country, or might have been introduced from abroad. To which it may be answered, that history is not entirely silent on this subject. In that border land between Europe and Asia, which was in earlier ages, as it is again, the seat of great events affecting the world's history—at once the birthplace and the battle-ground of nations—Hippocrates has located a people whom he calls the Macrocephali, or Longheads. Some of them dwelt near the river Phasis, and not far from the recently captured Turkish province of Kars. The shape of their heads, he tells us, "was at first a work of art, because they esteemed those having the longest heads the most noble, but nature had accommodated herself to it. It began in this way. As soon as an infant was born, they moulded the soft and tender head with their hands, and compelled it to grow into the desired form by bandages and other contrivances. In the course of time, this configuration became natural to the people, and the use of means to produce it ceased to be necessary."²

On Bactrian coins, in crania from the coast of Yemen, and in the islands of the Indian Archipelago, a similar configuration is reported to have been observed.³ The former existence of "*Flat-heads*" in Asia Minor has been confirmed by the

¹ Peruvian Antiquities, ch. ii., Dr. Hawks' translation, N. Y., 1853. The original edition of this *national* work was printed for the authors at Vienna, in 1851.

² Hippocrates, Opera Omnia, ed. 1595, sec. iii. p. 72, freely translated. "If other singularities are transmitted to offspring," Hippocrates asks, "what hinders then that a Macrocephalus should be born of a Macrocephalus?" Though now, he intimates, they are not in like manner so born, because, for want of care, the model has become extinct.

³ Smith's Races of Men, p. 143, and Plate V. Crawford's Ind. Archipel., I, 218.

discoveries of William Burekhardt Barker, who, in 1845, obtained a large quantity of terra-cotta images from a mound on the site of the ancient Tarsus. Among these were many specimens of flattened or compressed heads, exhibiting, in some instances, the precise contour of the heads upon the monuments of Central America. Others illustrated the form produced by downward pressure in the direction of the spinal column. The whole collection having been submitted to Mr. Abington, a gentleman skilled in artistic pottery, he was led by the resemblance between a portion of the heads and those portrayed by Mr. Stephens in his *Incidents of Travel in Central America and Yucatan*, to the construction of a theory connecting them together. He imagined that the anomalous faces were faithful portraits of Huns, or the Hiongnu, whose inhuman faces and horse-like heads so terrified the inhabitants of the countries they invaded, and one division of whom, after sweeping all before them as far as China, and penetrating the wilds of Siberia, might, as Humboldt has suggested, have crossed to America. In addressing Mr. Barker, he says: "Perhaps you have the gratification of first bringing before the world a true and exact representation of that once terrible but now forgotten race, and that too by an illustration probably *unique*; also of removing the veil which has hitherto concealed the mysterious origin of the men who have left the memorials of their peculiar conformation upon the sculptured stones of America."¹

With the heads above described, Mr. Barker obtained images of the divinities of classical Greece and Rome in great numbers, and in a high style of art—the "Lares and Penates" which give the title to his book; and, what is very remarkable, the disfigured heads were also crowned with the tokens of divinity, indicating that they also had at some time been objects of worship. These curious facts may be added to the many coincidences that have been supposed to imply an Asiatic derivation for at least a portion of the original population of this country.

The statement that, under the microscope, the hair of the American Indians exhibits a form and structure peculiar to itself, or at least distinguishing it from that of whites and negroes, should not be omitted from this physiological summary. This subject has been elaborately investigated by Peter A. Browne, Esq., of Philadelphia, and the results are given, with illustrations, in the third volume of Mr. Schoolcraft's general work; having before appeared in literary and scientific journals. It is claimed that the hair of the American natives is cylindrical in form, while in the Caucasian races it is oval, and among negro nations it is eccentrically elliptical. These distinctions, if sustained, are expected to have an important bearing upon the affinities and diversities of races. It has, however, been questioned by other naturalists whether the phenomena observed are sufficiently uniform to establish a scientific principle.²

¹ Lares and Penates; or Cilicia and its Governors, &c. By Wm. Burekhardt Barker, M. R. A. S. Lond., 1853, p. 203, *et seq.*

² Dr. Carpenter asserts that the characters specified by Dr. Browne will not stand the test of extensive observation; that the form of the shaft varies greatly in the hairs of the same race, and even in those of the same individual; for not only is it sometimes round, sometimes oval, and more rarely eccentrically elliptical, or nearly flat, but may be even reniform, or channelled on one side.—*Cyc. of Anat. and Phys.*, Part XLI, p. 1338.

While recording the various forms of opinion that have sprung from philological and physiological observations in this country, we hope that sufficient care has been taken to avoid giving any adscititious weight to particular views. If ideas opposed to the original unity of mankind appear anywhere to be relatively prominent, it is owing, perhaps, to the circumstance that whatever conforms to general opinion arrests attention less than that which differs from it. It is only as ideas, which their authors have connected with our subject in a manner not to admit of separation, that they find a place in our pages. As a portion of the bibliography of American Archæology they can neither be omitted with propriety nor be so disguised as to conceal their tendency. The great question of human unity or diversity rests upon a far wider survey of men and nations than the ethnology of this continent comprehends; and all local facts or phenomena require to be associated with researches linguistic, physiological, and historical, as general and thorough as those of Prichard and Bunsen, before they can prudently be made the basis of argument, much less the foundation of faith. The conclusions of Prichard and Bunsen appear not to have been invalidated in their own estimation by any phases of human condition or conformation developed in the New World; Humboldt's personal researches in this hemisphere have not impaired his faith in the singleness of human origin;¹ and one of our historians, at the close of an elaborate survey of the American aborigines in connection with other races, asserts that "the indigenous population of America offers no new obstacle to faith in the unity of the human race."²

Having endeavored to present in a connected form the various aspects which philological analysis and physical science have given to the question of the origin or derivation of the Indian race, we may continue the chronological *resumé* of leading publications that relate, either specially or inclusively, to the antiquities of our national territory.

At about the period of 1830, a rage for migration to the West spread like an epidemic through the Eastern States. In New England particularly, under the influence of a depressed condition of manufacturing and commercial enterprise, the feeling was prevalent that the Atlantic States, with a sterile or exhausted soil, must decline in wealth and population before the rising importance of the productive regions of the Mississippi Valley. While the Southern emigrant transferred the movable appurtenances of his plantation to Louisiana or Arkansas, the farmers of Massachusetts, New Hampshire, and Vermont, sought some locality between the Ohio and the Great Lakes. From Illinois and Michigan they soon advanced into the Territory of Wisconsin, and prepared the way for the discovery of a new and curious class of antiquities. At that time, during half a dozen or more succeeding years, the press was prolific of Notes on the Western States, Guide Books, Sketches of Travel, Letters from Emigrants, and other publications descriptive of the country, in which a chapter was often bestowed upon mounds and other ancient

¹ See "Cosmos," Vol. I, closing chapter.

² Bancroft's History of the United States, III, 318.

remains, and the crude speculations to which the sight of them gave rise. These not unfrequently added to the stock of local information, but did not throw much new light on the general subject.

It was in 1836, that the first knowledge appears to have been gained of the emblematic earthworks of Wisconsin. Mr. Lapham, whose elaborate Memoir respecting them has recently been published by the Smithsonian Institution, claims to have been the original discoverer, and to have described some of them in the newspapers of that date. They were brought more prominently to public notice by Mr. R. C. Taylor in a paper accompanied by illustrations, communicated to the *American Journal of Arts and Sciences* of April, 1838. They will be considered hereafter under the period of their full development by Mr. Lapham.

Indian Biographies, or works relating to native manners, customs, and exploits, which come within the period of our own national history, do not properly belong to the class of publications that are the subjects of notice in this memoir, although they may indirectly elucidate archæological questions. But the comprehensive sketches of Indian history and adventure, compiled by Mr. Drake (which, in successive editions, have, since 1832, continued to expand in bulk and improve in accuracy), contain also an account of North American antiquities, and a summary of theories and speculations respecting the origin of population on this continent. The author's organ of marvellousness is not large, and he is not disposed to attach an unnecessary degree of wonder and mystery to relics of antiquity, or to circumstances that happen not to be easy of explanation. He comments freely upon hypotheses that appear to him irrational or visionary, and is satisfied with referring the erection of the earthworks at the West to the ancestors of the existing native race, under some condition favorable to a more stationary life and a denser population. His book is the result of great industry and careful research, and contains a large amount of interesting and useful information.¹

When Professor Rafn was engaged, on behalf of the Royal Society of Antiquaries at Copenhagen, in preparing the extensive work on the Discovery of America by the Northmen, published by that institution in 1837, letters were sent to societies and individuals in this country soliciting the communication of facts that would illustrate the subject. There followed a correspondence with the Historical Society of Rhode Island, through its secretary, Dr. Webb, in relation to the celebrated Dighton rock, and other inscribed stones in the same vicinity.

As the Icelandic manuscripts were supposed to point to the precise region where that rock is placed, as having been occupied by Northmen, the characters drawn upon it were naturally studied with anxious interest by the Danish antiquaries. A new transcript of the lines and figures carefully drawn, a sketch of the rock and surrounding scenery, and maps of the neighboring coasts and country, were forwarded by gentlemen of the Rhode Island Society to Copenhagen. These were submitted to scholars familiar with Runic monuments and inscriptions, who pro-

¹ Biography and History of the Indians of North America, from its first discovery to the present time; with an Account of their Antiquities, Manners and Customs, Religion and Laws. By Samuel G. Drake: Boston, 1832, 1841.

nounced the rock at Dighton to be a monument of that class, and the characters upon it a memorial of the occupation of the country by the Scandinavian navigators.

It was, therefore, with some elation of feeling, and greatly increased confidence, that the routes of the Northmen were traced along the shores of New England, and the positions determined, where they had stationed themselves. Supported by such tangible evidences of habitation, there was also less hesitation in extending the claim of Scandinavian discovery to the more Southern portions of the United States. Anticipations were indulged in, that the interpretation put upon the Dighton inscription would be confirmed by the development of other vestiges of that people; and when, after the publication of the volume devoted to these proofs, its author received from Dr. Webb a drawing of the circular stone structure at Newport, of whose erection no distinct account had been preserved, and some copper ornaments or implements found with a skeleton at Fall River, much learning was employed to prove by analogies that these also were of Scandinavian derivation.¹

But if hopes were thus excited that the veil of mystery was to be lifted from any portion of American archæology, they were not sustained by cooler reflection and more careful scrutiny. The great dissimilarity in the different delineations of the forms of the marks on the Dighton stone, impaired confidence in the possibility of assigning to them any positive signification as linguistic characters. The improbability that the structure at Newport could have been in existence when that place was settled by the English without attracting general attention and remark, combined with the fact that both records and traditions referred to it as a *wind-*

¹ *ANTIQUITATES AMERICANÆ, sive Scriptores Septentrionales Rerum Ante-Columbianarum, in America.* Hafniæ, 1837.

Supplement to ANTIQUITATES AMERICANÆ: 1841.

Mémoires de la Société Royale des Antiquaires du Nord: 1840, 1844.

An Advertisement by the Danish Society, of the "*Antiquitates Americane*" after an account of the *Sagas* embraced in the work, contains the following statement:—

"To which are added: I. A description accompanied by delineations and occasionally by perspective views of several Monuments, chiefly Inscriptions, from the middle ages, found partly in Greenland and partly in the States of Massachusetts and Rhode Island in North America, on the one hand confirming the accounts in the *Sagas*; and on the other illustrated by them. II. Detailed Geographical Inquiries lately undertaken at the instance of the Society, whereby the sites of the regions and places named in the *Sagas* are explored, and are pointed out under the names by which they are now commonly known, viz: Newfoundland, Bay of St. Lawrence, Nova Scotia, and especially the States of Massachusetts and Rhode Island, and even districts more to the South, probably situate in Virginia, North Carolina, and in Florida, which is supposed to be the most southerly land mentioned in the most authentic *Saga* accounts, although sundry of the northern geographers of the middle ages would seem to intimate their knowledge of the easterly direction taken by the continent of South America. They are chiefly based on the accounts in the ancient MSS., and on the explanations of the astronomical, nautical, and geographical statements contained in the same, which besides receive the most complete confirmation from accounts transmitted by distinguished American scholars, with whom the society have entered into correspondence, and who, after several journeys undertaken for that object in Massachusetts and Rhode Island, have communicated accurate illustrations respecting the nature of the countries, their climate, animals, productions, etc., and have furnished the society with descriptions and also with delineations of the ancient monuments found there."

mill, discountenanced the idea that it could have any other than a modern origin; and a more particular investigation of the circumstances connected with the Fall River skeleton showed that little weight could be attached to that relic as a source of reliable evidence.

The narratives of the voyages of the Northmen, and their discovery of this country, are, however, regarded as well attested, leaving the question open as to the distance in a southerly direction to which their observations extended; and many striking coincidences seem to justify the conclusion that the Vinland of these narratives was really in Narraganset Bay.¹

There is a fact which deserves to be mentioned in connection with the "Fall River Skeleton" that we have not seen anywhere so employed. The articles found upon it which excited the interest of the Danish antiquaries were, as described, a brass breastplate; brass arrow-heads; and a belt made of small tubes of the same metal, a few inches in length, fastened together side by side. These are certainly unusual articles to find associated with the person of a savage who lived before the occupancy of the country by the English. But in Brereton's *Brief and True Relation of the Discovery of the North Part of Virginia* (New England), by Gosnold, in 1602, it is stated that while they were at an island, since identified, and lying off the coast nearest to Fall River, the natives came to them from the mainland, and the articles they brought with them are described as follows: "They have great store of copper, some very red and some of a paler color; none of them but have chains, ear-rings, or collars of this metal; they head some of their arrows herewith, much like our broad arrow-heads, very workmanly made. Their chains are many hollow pieces cemented together, each piece of the bigness of one of our reeds, a finger in length, ten or twelve of them together on a string, which they wear about their necks; these collars they wear about their bodies like bandeliers, a handful broad, all hollow pieces like the others, but somewhat shorter, four hundred pieces in a collar, very fine and evenly set together. Besides these, they have large drinking cups made like skulls, and other thin plates of copper made much like our boar-spear blades, all which they so little esteem, as they offered their fairest collars or chains for a knife or such like trifle."²

As Gosnold, according to the same narrative, had just previously found a Biscayan shallop, with mast and sail and an iron grapple, in possession of eight Indians, one of them "apparelled in a waistcoat and breeches of black serge," and another in "a pair of breeches of blue cloth," there is no difficulty in supposing that all these materials came from the wreck of some unfortunate fishing vessel, notwithstanding Brereton says the Indians intimated by signs that they obtained their metal from the earth.

In 1838, the late President Harrison prepared his well-known *Discourse* for the

¹ A very lucid synopsis of the contents and claims of the "Antiquitates Americanæ," by Hon. Edward Everett, appeared in the *N. A. Review*, for January, 1838; and a translation of all the most important Sagas, with a critical examination of their authenticity, by Joshua Toulmin Smith, was published at Boston, and also reprinted in London in 1839, with maps; and was again printed in London in 1842, with maps and plates.

² Purchas's Pilgrims, Vol. IV; reprinted in Mass. Hist. Coll., 3d ser. Vol. VIII.

Historical Society of Ohio;¹ a dissertation not only creditable to his literary taste and general scholarship, but containing a large amount of valuable information upon points of Indian history, and the result of his observations and reflections respecting the ancient remains of that region. He had been familiar with the latter many years, having accompanied General Wayne in an excursion to examine those at Cincinnati in 1793, and had studied them both as a military man and as an antiquary. Referring to the fact that the country immediately bordering on the Ohio, when first made known to the whites, appeared not only to have been deserted by its more ancient inhabitants, but to be left by recent races of Indians, as a common hunting-ground or battle-field, without permanent occupancy, he seeks an answer to the question why so beautiful and fertile a portion of country had been thus abandoned.

To aid in forming a satisfactory conclusion, we possess, he says, but a single recorded fact, viz: that the pictorial records of Mexico ascribe the origin of that nation to the Aztecs, who are said to have arrived in Mexico about the middle of the seventh century. He quotes Bishop Madison as declaring his conviction, after much investigation, that the Aztecs are the people who once inhabited the valley of the Ohio; and, on the ground that probabilities are in favor of that opinion, he adopts it, and endeavors to explain the cause and manner of their departure. He assumes, from the appearance of the remains, that they were a numerous people, and congregated in considerable cities; that they were essentially agricultural in their habits, and possessed a national religion, marked by imposing and cruel ceremonies; and that they were driven from their seats by the assaults of a ruder and hardier race on both their northern and southern frontiers. These conclusions were founded on an observation of the differing character of their works at different places. The great inclosures at Circleville and Newark, he was persuaded were not of a military nature; while those on the Ohio River were evidently designed for that purpose, and both could never have been created for the same use by the same people. The contest he regards as having been long and bloody, and the retreat, which was gradual, and delayed at positions favorable for defence, he considers to have been along the descent of the Ohio. In a note to his *Discourse*, General Harrison remarks upon some objections that may be suggested to the theory of the identity of this people with the Aztecs.

“The circumstance which militates most against the supposition of the identity of the Aztecs with the authors of the extensive ancient works in Ohio, is the admitted fact that the latter entered the valley of Anahuac from the northwest, that is, from California, which is much out of the direct route from Ohio to Mexico. A strong argument in favor of it is the similarity of the remains which are found in that region (California), as well as in Mexico itself, with those in the valley of the Ohio. I am not informed whether there are any such in the intermediate country between the lower Mississippi and California. If there are none, it will rather confirm and strengthen my opinion that the fugitives from the Ohio were,

¹ A Discourse on the Aborigines of the Valley of the Ohio. By William Henry Harrison. Cincinnati, 1838.

like those from Troy, a mere remnant, whose numbers were too small to erect works of so much labor as those they left behind had required; but after their strength had been increased by a residence of some time in California, the passion for such works returned with the ability to erect them."

"If the opinion is adopted that the Aztecs were never in Ohio, but had pursued the direct route from Asia (whence it is believed they all came) to California, along the coast of the Pacific Ocean, and that the authors of the Ohio erections were from the same continent and stock, the question may be asked: Where did the separation take place? Was it before they left Asia, or after their arrival on the American continent?"

If there are no similar works in the northeast of Asia, or on the route thence towards the Ohio, he thinks that fact would go far to show that such works originated in Ohio, and that those who erected them were the same people who afterwards sojourned in California and finally settled in Mexico; but if the opinion is adopted, that these were distinct peoples or different branches of the same Asiatic stock, it must be believed also that each fell into the practice of erecting extensive works of the same form and materials, in a manner not known to be practised by any other people, without any previous knowledge to guide them, and without any intercourse. This he deems very improbable, and adds that: "If the Aztecs were not the authors of the Ohio works, we can only account for the ultimate fate of those who were, by supposing that they were entirely extirpated, preferring, like the devoted Numantians, to be buried under the ruins of their own walls to seeking safety by an ignominious flight."

It will occur to the reader who is aware how wide an extent of country on this side of the Mississippi the remains referred to by General Harrison are now known to occupy, that any hypothesis respecting them must apply not merely to the valley of the Ohio, but to a territory reaching to Lake Ontario, if not to the St. Lawrence on the north, and to the Gulf of Mexico on the south; that, in the State of New York, there are works of defence of a character as distinctly marked as those on the Ohio, and that in Florida are mounds and inclosures as suggestive of religious ceremonials and barbaric pomp as those of Circleville and Newark.

The main portion of General Harrison's discourse is devoted to a correction of the prevalent opinion that the confederacy of "the Five Nations" had subjugated the tribes which formed the Illinois confederacy, and occupied the region between the Ohio and the Mississippi.¹

¹ The argument in favor of the great antiquity of some of the earthworks at the west derived from the nature and size of the forest trees that cover them, is well illustrated by General Harrison in the following passage: "The process by which nature restores the forest to its original state, after being once cleared, is extremely slow. In our rich lands, it is, indeed, soon covered again with timber, but the character of the growth is entirely different, and continues so, through many generations of men. In several places on the Ohio, particularly upon the farm which I occupy, clearings were made in the first settlement, abandoned, and suffered to grow up. Some of them, now to be seen, of nearly fifty years growth, have made so little progress towards attaining the appearance of the immediately contiguous forest as to induce any man of reflection to determine, that at least ten times fifty years would be necessary before its complete assimilation could be effected. The sites of the ancient works on the

The next year a fac simile of one of the pictorial records referred to by General Harrison was published in connection with an essay on American Antiquities, by Mr. Delafield, of Cincinnati.¹ About the year 1780, the Chevalier Boturini, an Italian, visited Mexico for the purpose of obtaining information concerning the ancient inhabitants of America. He there received the polite attentions of the government, and every facility was afforded him of becoming acquainted with the history and customs of the country. He was highly successful in amassing valuable information, and in collecting hieroglyphic paintings, maps, drawings of the temples, idols, &c. From some unknown cause, before he was quite ready to return to Europe, he incurred the displeasure of the government, and was thrown into prison. There the unfortunate gentleman died, and his collections and manuscripts were taken from him and scattered.

Subsequently, Mr. Bullock, of London, went to Mexico with nearly the same views as those of Boturini. He also succeeded in obtaining many articles of

Ohio present precisely the same appearance as the circumjacent forest. You find on them all that beautiful variety of trees, which gives such unrivalled richness to our forests. This is particularly the case on the fifteen acres included within the walls of the work at the mouth of the Great Miami, and the relative proportions of the different kinds of timber are about the same. The first growth, on the same kind of land, once cleared and then abandoned to nature, on the contrary, is more homogeneous—often stinted to one or two, or at most three kinds of timber. If the ground had been cultivated, yellow locust, in many places, will spring up as thick as garden peas. If it has not been cultivated, the black and white walnut will be the prevailing growth. The rapidity with which these trees grow for a time, smothers the attempt of other kinds to vegetate and grow in their shade. The more thrifty individuals soon overtop the weaker of their own kind, which sicken and die. In this way there is soon only as many left as the earth will well support to maturity. All this time the squirrels may plant the seeds of those trees which serve them for food, and by neglect suffer them to remain—it will be in vain; the birds may drop the kernels, the external pulp of which has contributed to their nourishment, and divested of which they are in the best state for germinating, still it will be of no avail; the winds of heaven may waft the winged seeds of the sycamore, cotton-wood, and maple, and a friendly shower may bury them to the necessary depth in the loose and fertile soil—but still without success. The roots below rob them of moisture, and the canopy of limbs and leaves above, intercepts the rays of the sun and the dews of heaven; the young giants in possession, like another kind of aristocracy, absorb the whole means of subsistence, and leave the mass to perish at their feet. This state of things will not, however, always continue. If the process of nature is slow and circuitous, in putting down usurpation and establishing the equality which she loves, and which is the great characteristic of her principles, it is sure and effectual. The preference of the soil for the first growth, ceases with its maturity. It admits of no succession, upon the principles of legitimacy. The long undisputed masters of the forest may be thinned by the lightning, the tempest, or by diseases peculiar to themselves; and whenever this is the case, one of the oft rejected of another family will find between its decaying roots shelter and appropriate food; and, springing into vigorous growth, will soon push its green foliage to the skies, through the decayed and withering limbs of its blasted and dying adversary, the soil itself yielding it a more liberal support than to any scion from the former occupant. It will easily be conceived what a length of time it will require for a denuded tract of land, by a process so slow, again to clothe itself with the amazing variety of foliage which is the characteristic of the forests of this region. Of what immense age, then, must be those works, so often referred to, covered, as has been supposed by those who have the best opportunity of examining them, with the second growth, after the ancient forest state had been regained:" pp. 30, 31.

¹ An Inquiry into the Origin of the Antiquities of America. By John Delafield, Jr.: New York, London, and Paris, 1839.

interest, which he took home to London and exhibited in a room fitted up for the purpose. Among other curiosities, he obtained a very long pictorial record, declared by the native Mexicans to be a chart, delineating the travels of the Aztec race through the continent to their resting-place in the valley of Anahuac. This was said to have been among the collections of Boturini, and to have upon it numerical figures and a table of references in his handwriting.

Mr. Bullock afterwards left London and established his residence in Cincinnati, Ohio, bringing with him two copies of the chart, fac similes of the original. From one of them the exact transcript engraved for Mr. Delafield was taken, and that gentleman expressed his "full and unhesitating faith in the genuineness and authenticity" of the document. This chart, or pictorial record, is seven and a half inches wide, and unfolds to the length of eighteen feet. It begins with a representation of an island on which are two human figures, an altar or tumulus (apparently), and the Mexican symbol for *house* six times repeated. From the island a figure is rowing a boat to what appears to be intended for the main land; and a series of human figures—sometimes marching, and sometimes at rest—with symbols of various kinds, and rude drawings of natural objects, continues through the length of the chart. These are interpreted as exhibiting a passage across a strait corresponding to Behring's Strait, and a gradual progress southward, of many years' duration, often interrupted for considerable periods, and diversified by events of a varied nature; all these circumstances being indicated, either by the evident significance of the drawings or by Mexican symbols and characters, whose meaning is well established. It is not claimed that any of the signs point to a residence, or even a transit east of the Mississippi; but coincidences of climate, soil, and natural productions, have been detected, or imagined, with a route nearer the Pacific.¹

In the text of Mr. Delafield's book, the notice of this document is preceded by his inquiry into the origin of American antiquities. Assuming that, on the discovery of the country, there were two distinct races inhabiting the continent—one civilized, comprehending the Mexicans and Peruvians, the other savage and nomadic, embracing all the families of the North American Indians; and that the civilized race went from the north, where they constructed the remains yet existing—he proposed to trace these races respectively to the source from whence they sprang. He divided the analogical evidence on which he rested his argument into seven classes, viz: I. PHILOLOGICAL. II. ANATOMICAL. III. MYTHOLOGICAL. IV. HIEROGLYPHIC. V. ASTRONOMICAL. VI. ARCHITECTURAL. VII. MANNERS AND CUSTOMS. These branches of inquiry, he fancied, unite in pointing to Egypt and Hindostan as the homes of the ancestors of the Mexicans, while they indicate the Mongolian origin of the barbarous tribes. Then, resorting to the national genealogies of Scripture and history, he followed the descent of the American aborigines from Chus or Chush, also called Cuth, the son of Ham, whose posterity, the Cuthians or Cuthites, were always a disorderly and wandering race; and some of whom, in process of time, were termed *Σκυθαι*, or Scythians, having the Greek Σ prefixed to their name.

¹ For a full exposition of Boturini's Chart, by Mr. Gallatin, see Trans. of Am. Ethnol. Soc., I, p. 120, *et seq.*

The author is able to track a division of the Cuthites, through various incidents of their history, to the northeastern parts of Asia, towards the point whence the Aztec emigration is supposed to have proceeded, as indicated by the Mexican chart.

In the work of Mr. Delafield, the antiquities of the United States are only referred to in connection with his argument, without any drawings, or details of description.

A different view of the introduction of population to this country, is taken in the able and more elaborate treatise of Mr. Bradford, published, under a somewhat similar title, in 1843.¹ This writer made no personal explorations, but, sitting in his study, carried forward his argument under the burden of an immense number and variety of citations from all classes of authorities. Hence his work is entitled to the merit, and is subject to all the disadvantages, attending that method of reasoning. Many of the statements so collected are such as will not bear the test of a rigid verification; and, although the justness of the author's conclusions should not be impaired by them, the erroneous impressions they convey are liable to be received by the incautious reader, and perhaps transferred to narratives and arguments where their influence is less likely to be corrected by the entire body of information with which they are associated.

Thus, a wrong idea of the state of art among the ancient Americans may easily be occasioned by admitting the hasty inferences of travellers and chance observers to the fellowship of better considered relations. A much higher degree of artistic and mechanical skill on the part of the primitive occupants of the regions now embraced in the United States, would be inferred from the summary in this volume than well-authenticated facts will warrant. For example, the passages respecting evidence of the working of gold and silver (including the process of gilding), the manufacture of glass beads, and the unqualified statement that "the inhabitants of New England appear to have possessed and manufactured chains, collars, and drinking cups of copper;" and many other citations, introduced as reliable illustrations of native skill and industry, exhibit the dangers incident to such a compilation.

But, aside from these considerations, Mr. Bradford's treatise is of high value and interest, not only on account of its great store of references, but for the reflections and opinions that are embodied with or deduced from them.

Mr. Bradford thus defines his purpose:—

"To embody and collate the descriptions of the most remarkable of the ancient remains and ruins scattered over the continent; to compare the traditions, manners, customs, arts, language, civilization, and religion, of its aboriginal inhabitants, internally, and with those of other nations; and thence to deduce the origin of the American race and its subsequent migrations—in a word, to attempt the determination of a portion of its unwritten history, is the object of this work."

His subject is treated of in two parts; the first having for its distinctive title,

¹ American Antiquities, and Researches into the Origin and History of the Red Race. By Alexander W. Bradford. New York, 1843: pp. 435.

“AMERICAN ANTIQUITIES;” the second that of “RESEARCHES INTO THE ORIGIN AND HISTORY OF THE RED RACE.” Four chapters of Part I. are devoted to an enumeration and consideration of the different classes of antiquities in the United States; and two chapters are taken up with the antiquities of Mexico, the Central American States, and South America. Part II. consists of twelve chapters; and the matters embraced in them are discussed under the heads of “Comparison of Ancient Monuments; Ancient Civilization; Aboriginal Migrations; The Routes of Migration; Ancient Navigation, and the Drifting of Vessels; The Physical Appearance of the Aborigines—their Language, Astronomy, and Religion; The Pyramids; The Conclusion.

The whole is characterized by extensive research, and a careful analysis and combination of facts. At the close of the review of the relics and monuments of the United States he deduces from them: “1. That their authors were all of the same origin, branches of the same race, and possessed of similar customs and institutions. 2. That they were numerous, and occupied a great extent of territory. 3. That they had arrived at a considerable degree of civilization, were associated in large communities, and lived in extensive cities. 4. That they possessed the use of many of the metals, such as lead, copper, gold and silver, and probably the art of working in them. 5. That they sculptured in stone, and sometimes used that material in the construction of their edifices. 6. That they had the knowledge of the arch of receding steps; of the art of pottery; producing utensils and urns formed with taste, and constructed upon the principles of chemical composition; and of the art of brick-making. 7. That they worked the salt springs, and manufactured that substance. 8. That they were an agricultural people, living under the influence and protection of regular forms of government. 9. That they possessed a decided system of religion, and a mythology connected with astronomy, which, with its sister science, geometry, was in the hands of the priesthood. 10. That they were skilled in the art of fortification. 11. That the epoch of their original settlement in the United States, is of great antiquity; and lastly, That the only indications of their origin, to be gathered from the locality of their ruined monuments, point towards Mexico.”

The results of Mr. Bradford's general inquiry are stated in the following extracts from his final chapter: “The facts adduced in the course of the preceding investigation, tend, it is conceived, to support the following conclusions:—

“I. That the three great groups of monumental antiquities in the United States, New Spain, and South America, in their style and character present indications of having proceeded from branches of the same human family:

“II. That these nations were a rich, populous, civilized, and agricultural people; constructed extensive cities, roads, aqueducts, fortifications, and temples; were skilled in the arts of pottery, metallurgy, and sculpture; had attained an accurate knowledge of the science of astronomy; were possessed of a national religion; subjected to the salutary control of a definite system of laws; and were associated under regular forms of government:

“III. That from the uniformity of their physical appearance; from the possession of relics of the art of hieroglyphic painting; from universal analogies in their

language, religion, traditions, and methods of interring the dead; and from the general prevalence of certain arbitrary customs; nearly all the aborigines appear to be of the same descent and origin; and that the barbarous tribes are the broken, scattered, and degraded remnants of a society originally more enlightened and cultivated:

“IV. That two distinct ages may be pointed out in the history of the civilized nations—the first and most ancient, subsisting for a long and indeterminate period in unbroken tranquillity, and marked towards its close by the signs of social decadence; the second, distinguished by national changes, the inroads of barbarous or semi-civilized tribes, the extinction or subjugation of the old and the foundation of new and more extensive empires: and,

“V. That the first seats of civilization were in Central America; whence population was diffused through both continents, from Cape Horn to the Arctic Ocean.”

In relation to the question of their origin, it appears:

“I. That the Red race, under various modifications, may be traced physically into Etruria, Egypt, Madagascar, ancient Scythia, Mongolia, China, Hindoostan, Malaya, Polynesia, and America, and was a primitive and cultivated branch of the human family: and,

“II. That the American aborigines are more or less connected with these several countries, by striking analogies in their arts, their customs and traditions, their hieroglyphical painting, their architecture and temple-building, their astronomical systems, and their superstitions, religion, and theocratical governments.

“It has long been a favorite theory, to trace the aborigines to a Tartar or Mongol migration from Siberia, by Behring's straits. But the Mexicans and Peruvians resemble the cultivated nations of oriental Asia even more closely than do the ruder tribes, the Siberian nomades; in fact they are *all* of the same race, and both in Asia and America, a decline into barbarism has produced analogous developments, which in connection with the relics of their ancient religion and customs, nearly assimilate the savages of both continents. It is not to be denied that there are some tribes in North America, which may have proceeded in modern times from Siberia; for example, the Chippewyans, and perhaps the Sioux, the Osages, Pawnees, and some of the northwestern nations; but even in relation to these, the proof depends mainly upon vague and uncertain traditions. But to suppose that the Mexicans, the Toltecs, the Chiapanese, the Mayas, and the Peruvians, were the descendants of such degraded and savage hordes as occupy northeastern Asia; or that they wandered from more southern Asiatic countries through the cold and inhospitable regions of the north, without leaving any vestiges of civilization on their way, appears equally contrary to experience and philosophy. The ancient monuments in Siberia are situated to the west and to the south, those of America are limited in their extent on the northwest; and in spite of the facility of communication afforded by the contiguity of the two continents in that direction, these facts would seem to be decisive of that question. On the other hand, the evidences of an early knowledge of the compass in China, of the great maritime skill of the Malays, and of their navigation, in remote ages, of the Asiatic seas, the facts stated in relation to the peopling of Islands by the accidental drifting of canoes, and more

than all, the actual proof of the distribution of population over the numerous and distant islands of the great Pacific, from Asia to Easter Island, render it unnecessary to resort to the violent hypothesis of a northern route. What greater obstacles were there to impede a passage from Easter Island to the American coast, than attended a migration to Easter Island? Indeed this island itself appears to have been successively occupied by different families; and its pyramidal edifices, and its colossal obelisks and statues, are closely analogous to the American monuments."

"The Red race, then, appears to be a *primitive branch of the human family*, to have existed in many portions of the globe, distinguished for early civilization; and to have penetrated at a very ancient period into America. The American family does not appear to be derived from any nation now existing; but it is assimilated by numerous analogies to the Etrurians, Egyptians, Mongols, Chinese, and Hindoos; it is *most closely* related to the Malays and Polynesians; and the conjecture possessing perhaps the highest degree of probability, is that which maintains its origin from Asia, through the Indian Archipelago."

It will be perceived that Mr. Bradford's inferences have many points of originality; and that while his views harmonize with those which derive the Americans from Asiatic races, they are antagonistical to the idea of a connection by way of Behring's Strait, and a gradual advancement thence of emigrating tribes into Mexico and Peru, bearing with them the seeds of their ultimate civilization. He deems it best to employ in his survey the simple classification of mankind into three divisions, the White, the Red, and the Black, that is, the Caucasian, the Mongolian, and the Ethiopian, without taking into account the varieties that have sprung from intermixture; and his comprehensive application of the denomination *Red*, as a distinction of race, enables him to include nearly every people with whom analogies of customs, arts, or physical attributes, have been supposed to be traced in this country.

In 1845, the American Ethnological Society published the first volume of its Transactions, containing an account of mummies from the nitrous caves of Tennessee, and of various images of stone and clay found in that State; from Professor Troost, of the University of Tennessee; and also an historical and descriptive account of the *Grave Creek Mound*, and an inscribed stone, said to be found therein; from Mr. Schoolcraft. Much has been written about that "Grave Creek Stone;" and the characters upon it have been submitted to the judgment of various learned men and learned associations, but its authenticity has not been satisfactorily established. It will be referred to again in another place.

At an early stage of this historical sketch, it was proper to specify the minor efforts to convey information, or solve questions connected with our subject, appearing in the form of communications to literary and scientific journals, or in some incidental way brought to public notice. Whilst a large portion of facts and discussions relating to the archæology of the United States existed in no other shape this course was a matter of necessity. But such particularity would be inappropriate at the present period of the narrative; and only in case of the development of some new variety of antiquities, or a new field of research, is it desirable to

enter into so minute a detail. We may mention, generally, that in the *American Journal of Science*, during the years from 1834 to 1844, were printed valuable papers from gentlemen who had examined particular works, or particular sections of country. The official reports of Topographical and Geological Surveyors also record many interesting facts and observations. The substance of these has, however, been mostly transferred to the archaeological work of Messrs. Squier and Davis, to which we may next direct out attention.¹

This was the first publication of the Smithsonian Institution, and was the result of explorations and investigations, commenced by the authors in the spring of 1845, and continued to the summer of 1847.

Dr. Davis had been previously located as a practising physician at Chillicothe, Ohio, which is in the heart of the most interesting remains that are found in the Mississippi basin, and apparently near the centre of the principal seats of ancient population. There he had been led by scientific curiosity, not only to examine the exterior of mounds and mural structures, abounding in the neighborhood, but to excavate in search of buried contents to explain the purpose of their formation. He had thus collected many singular and striking specimens of art, of superior execution, found in positions and connected with circumstances that promised well to repay the labor of more careful and more extended scrutiny; and, so far as his professional engagements permitted, he was devoting his time and his means to the pursuit.

While Dr. Davis was thus engaged, Mr. Squier became a resident of the State, and was soon attracted to the discoveries which his future colleague had commenced. Combining a knowledge of practical surveying, with that readiness of pen which experience in the editorial chair of a daily press was calculated to bestow, and prompted by the energy and ardor that have since characterized his scientific and literary labors, he gave himself up to the prosecution of studies and researches that might enable him to illustrate the nature and origin of those yet mysterious relics.²

These gentlemen, having united their exertions and resources for this mutual purpose, endeavored to obtain the co-operation and assistance of scientific institutions in the accomplishment of their design; and were so fortunate as to make an arrangement with the Secretary of the Smithsonian Institution, which encouraged them to proceed, and secured the publication of their work in a manner to give effect to its merits.

It was a little remarkable, considering all that had before been said and done about the same antiquities, how fresh the subject was to the public mind, how few had any intelligent information respecting it, and how generally unprepared was

¹ Ancient Monuments of the Mississippi Valley: comprising the results of extensive Original Surveys and Explorations: By E. G. Squier, A. M., and E. H. Davis, M. D. Published by the Smithsonian Institution, Washington, 1848.

² The writer visited Chillicothe in 1845, on behalf of the American Antiquarian Society, with reference to the movement for a re-survey of the antiquities of the west; and was made acquainted with the operations and intentions of the gentlemen above named, and the circumstances under which these originated.

the community at large for any correct conception of the nature of the marvels that might be revealed to an explorer. The time had certainly arrived when new efforts were called for to determine with accuracy the nature and extent of those vestiges of a higher social condition than had been transmitted to later races; and, happily, the men and the means were provided for the accomplishment of the object. No national questions of Science were capable of creating equal interest abroad, or were likely to excite more general attention at home. A more active spirit of inquiry upon all points connected with the primeval history of the western hemisphere, has evidently been promoted by the publication of the work of Messrs. Squier and Davis, and more correct ideas have in consequence been attained.

An analysis of this work in detail will not be attempted; but an effort will be made to gather from it the prominent impressions that a new and wider survey of these remains produced, after the lapse of twenty-five years from the time when they were first collectively examined and illustrated.

The authors satisfied themselves that aboriginal monuments in the United States are diffused over a vast extent of country; that they are found on the sources of the Alleghany river, and in the western part of the State of New York, on the east; and extend thence westwardly along the southern shore of Lake Erie, and through Michigan and Wisconsin to Iowa and Nebraska, on the west. They found no account of their occurrence above the Great Lakes. They refer to Lewis and Clarke as reporting their existence on the Missouri, one thousand miles above its junction with the Mississippi, and state that they have been observed on the Kansas and Platte, and other remote western rivers. They are represented as being found all over the intermediate country, and through the valley of the Mississippi to the Gulf of Mexico, and as lining the shores of the Gulf from Texas to Florida, extending, in diminished numbers, into South Carolina. They are declared to exist in great numbers in Ohio, Indiana, Illinois, Wisconsin, Missouri, Arkansas, Kentucky, Tennessee, Louisiana, Mississippi, Alabama, Georgia, Florida, and Texas; and to be found, in less numbers, in the western portions of New York, Pennsylvania, Virginia, and North and South Carolina; as also in Michigan, Iowa, and the Mexican Territory beyond the Rio Grande del Norte. In all these various regions they are said to be mainly confined to the neighborhood of the principal streams, and when occurring far from them to be of small size.

In this wide extent of country, three geographical divisions were apparent to the authors as possessing remains peculiar to themselves, although certain general points of resemblance pervaded them all. Thus in the region bordering the Upper Lakes, particularly in Wisconsin, the earth-works were in emblematical forms, rudely representing animals and other effigies. In the great section watered by the Ohio and its tributaries, very few such structures were to be seen; but fortified elevations, and large enclosures of symmetrical shape abounded; the latter occupying the river bottoms, and appearing from their formal arrangement, their suites of mounds, and their graded avenues, adapted rather to religious ceremonials than to purposes of habitation or protection. Nearer the Gulf of Mexico, the fortifications, the enclosures, and the conical tumuli, became more rare; and truncated pyramidal structures of less height than the mounds of the north, but of greater hori-

zontal dimensions, and connected with systems of dependent works, were spread numerously through those southern districts.

The central or intermediate region, between the northern and southern extremes, was the principal field of investigation by Messrs. Squier and Davis, as it had been that of Mr. Atwater. To this their personal explorations were confined; and notices of antiquities beyond its limit necessarily assume a supplementary position in the work, as derived exclusively from extraneous sources of information, and are not strictly embraced within the descriptive classifications applied to the varieties of remains they had themselves examined.

Although the vestiges of ancient art and labor, in all their forms, usually constitute an associated system, the different earth and stone-works, for convenience of exploration, were resolved into two general classes, viz: ENCLOSURES, bounded by embankments, circumvallations, or walls; and simple tumuli, or MOUNDS. Of these, subordinate divisions were made; as ENCLOSURES FOR DEFENCE, and ENCLOSURES FOR SACRED AND MISCELLANEOUS PURPOSES; MOUNDS OF SACRIFICE, TEMPLE MOUNDS, MOUNDS OF SEPULTURE, &c.

The writers state that "nothing can be more plain than that most of the remains in *northern* Ohio are military works." They are of a slight character, requiring palisades upon their embankments to render them of much service for protection; but they are contiguous to water, usually cutting off the bends of rivers, guarding the space thus enclosed from access by land, or they are on the high bank of some stream, and invariably have no higher land near them from which they could be commanded. The walls are generally double, and the ditch always *without*. The scarcity of mounds, the absence of pyramids of earth, and of rectangular works, and their general difference from the fortified positions nearer the Ohio, are supposed by Messrs. Squier and Davis to indicate that they belonged to a distinct people.

It is mentioned that entrenchments of a similar character occur still further northward and eastward, and also in Kentucky and Tennessee, implying the existence of sparse but warlike tribes around that central region which bears evidence of denser population and more stationary habits of life.

The defensive works of this interior section are described as exhibiting much judgment in the choice of their locations and much skill in their construction. They are usually upon places above the level of the surrounding country, and naturally difficult of access, having on all sides, or all but one, a precipitous descent. The common defence is a simple embankment thrown up along, or a little below the brow of the hill, varying in height and solidity as the declivity is more or less steep; but the parapets, in form and character, are adapted to the nature of the position, which is guarded by a fosse, by double walls, and mounds, or other contrivances, as circumstances require.

These fortresses vary in size, enclosing from five acres to one hundred and forty. The average of twenty-four of them is forty-six acres. Within some of the largest are marks of habitation, as if they had been occupied by communities in some time of prolonged danger. The smaller ones are most numerous. The walls of earth and stone, it is remarked, although often high and heavy, would in themselves

furnish very imperfect means of protection and resistance; hence it is obvious that they were surmounted by palisades, or by something equivalent. They also have many gateways, or openings, which must have been defended by perishable or temporary obstructions.

The enclosures whose form, position, and attendant circumstances, indicate that they were erected for other than defensive purposes, are elaborately exemplified. They are termed *sacred* enclosures, on the ground that the supposition of their being designed for religious rites and ceremonies is the most natural and satisfactory one. Some of them prove to be circles or squares of exact proportions; and precisely the same dimensions have been found in separate localities. The characteristics ascribed to them are, that they are often in a position to be commanded by adjacent heights; that when a ditch occurs, it is *within* the embankments; that, although occasionally isolated, they are usually in groups, forming fanciful figures, but evidently the result of a plan or system; that the larger circles are oftenest found in combination with rectangular works, and connected with them either directly or by avenues; that the walls are comparatively slight, from three to seven feet high, seldom accompanied by a ditch, and formed from earth taken evenly from the surface near them, or from large pits in the neighborhood; and that they enclose pyramidal mounds not much elevated, flat on the tops, with graded paths of ascent, and well adapted to be used for altars or for the foundations of sacred edifices.

The greater number of circles are said to have a nearly uniform diameter of two hundred and fifty feet; yet many of the examples given contain from twelve to twenty-five acres, and some include a space of fifty acres.¹

The broad and graded avenues ascending the plateaus on which the principal structures are situated, as if prepared for the solemn march of a procession; the lines of low parallel embankments uniting in a curve at one end, suggesting no conceivable design of practical utility; and the nature and discovered uses of the tumuli connected with the systems of works designated as sacred, are explained and delineated in a manner which confirms and illustrates their adaptedness to the purposes ascribed to them.

If Messrs. Squier and Davis were enabled thus to corroborate previous opinions respecting the two classes of Enclosures, they were even more successful in exemplifying the characters and designs of the various kinds of Tumuli.

The low conical or dome-shaped tumuli within the enclosures termed sacred, or closely adjoining them, were found to exhibit these peculiarities. At their bases beneath the vertex were raised and concave symmetrical fabrics, usually of clay, that might well be called altars, inasmuch as they had upon them the customary evidences of sacrifice: There were human bones mixed with the articles likely to be most precious to a rude people, viz: beads, pipes, images, and other ornaments and implements; all of which had been subjected to fire of sufficient intensity or duration to bake the fabric of clay on which they were deposited. Then over

¹ The great circle at Newark, enclosing 30 acres, has a wall of 12 feet perpendicular height and 50 feet base; with an interior ditch 7 feet deep and 35 feet wide.

them had been ceremoniously placed a covering of earth in layers, or strata, of different materials, carefully and evenly spread, and adjusted to a conical shape—the first stratum, perhaps, of loam, the next a thin covering of pure sand; earth and sand, or small stones, continuing to alternate, but in different proportions, till the mound was completed. In consideration of their position, and the circumstances attending them, these received the name of *sacrificial mounds*. They were the most fruitful of relics; the richest among them being of slight elevation and unimposing exterior. Some of them contained altars alone, or relics without human remains, showing that they could not be regarded as places of interment.

A more numerous class of mounds, generally removed from enclosures, and often of great height, were found to cover a single skeleton—in very rare instances more than one—enveloped in bark or coarse matting, and surrounded by a rude protection of timber. The great Grave Creek mound, the most striking example of this class, is a double monument of unusual character. At its base were two skeletons, and thirty-five feet (or half the total height of the mound) above them, was another; so that the superior altitude of this tumulus is the result of two interments, probably at different periods of time.

These mounds contain, with the human remains, various ornaments and implements, but no altars, and the remains have not been burned. They are therefore denominated *sepulchral mounds*, and might with equal propriety be styled *monumental mounds*.

The third variety of earthen elevations, termed *temple mounds*, were so named because their place within the enclosures, their rectangular and truncated forms, and the peculiarity of inclined planes of easy ascent attached to them, make them correspond to the Mexican structures on which sacred edifices were situated. In the United States, near the gulf of Mexico, such was also the use of the similarly shaped mounds which characterize that region.

These diversities are clearly defined by Messrs. Squier and Davis, their antiquity well established, and their occasional invasion by later races satisfactorily distinguished from their original and legitimate use.

Another kind of mounds, erected on commanding positions, they believe to have been intended for signal or alarm posts; ranges of them being so situated that by their means signals of fire could be transmitted a great distance in a few moments. These are called *mounds of observation*.

While the authors are confident that the leading purposes of the mounds (at least those in Ohio) have been rightly determined, they admit the existence of many of an anomalous character, conforming to no classification. It appears natural enough that this should be so when we consider that mound building, for some purpose or other, is a common practice with rude nations, and still prevailing to some extent among the aborigines of the country. There are mounds that are composed of bones collected with pious care by recent tribes from the burial places of their fathers; and there are others known to have grown from gradual contributions made by the passing Indian, in recognition of an inherited obligation to mark the spot, for some reason that he may not himself be able to explain. It would be too much to expect that the motive for these varied and

multitudinous erections should in all cases be made apparent. If the most prominent and remarkable have been classified, and their single or associated purpose elucidated, it is quite as much as can reasonably be required of an explorer.

The labors of these gentlemen were specially rewarded by the number and quality of the works of art obtained by them from the sacrificial and sepulchral tumuli; and, what is of great importance, they established the principle of discrimination between articles of European origin, or modern manufacture, which have by some means been buried in and about the ancient works, and the true relics of their builders. Many of the hypotheses that have confused in so remarkable a degree the archæology of the United States are due entirely to the carelessness and ignorance which in this particular have heretofore prevailed.

The true relics of the mounds were found to be articles of pottery of delicate material and graceful form, in the shape of vases, pipes, and moulded figures; implements and ornaments of copper, hammered without melting from the native metal; arrow-heads and spear-heads and various ornaments and implements of stone, precisely similar to those of modern use; strings of pearls, and beads of shells, bone, ivory, and the claws of animals; plates of mica, pieces of galena, and small portions of silver, hammered thin and made to cover some of the smaller ornaments; and, with these, sculptured figures of animals and the human head, in the form of pipes, wrought with great delicacy and spirit from some of the hardest stones. The last-named are relics that imply a very considerable degree of art, and, if believed to be the work of the people with whose remains they are found, would tend greatly to increase the wonder that the art of sculpture among them was not manifested in other objects and places. The fact that nearly all the finer specimens of workmanship represent birds, or land and marine animals, belonging to a different latitude, while the pearls, the knives of obsidian, the marine shells, and the copper, equally testify to a distant though not extra-continental origin, may, however, exclude these from being received as proofs of local industry and skill. Whether they can be considered as evidences of commercial relations with remote places and people, as suggested by Messrs. Squier and Davis, or as having been casually obtained through intermediate agencies, must depend upon other circumstances than their mere presence where they are found.

The silver crosses, the glass beads, the plated and gilded ornaments, the iron instruments, that have figured in so many speculations, are shown to be modern deposits whose origin it is not difficult to trace; and the stone medal from the Grave Creek mound, fancied to contain either Libyan or Runic characters, which has excited so much discussion, is pronounced to be wholly unworthy of confidence as a genuine relic.

The account, in this volume, of the pictorial or emblematic earthworks of that district which is chiefly included in the State of Wisconsin, was derived from papers of Messrs. Richard C. and S. Taylor, published in the *American Journal of Science and Arts*, and from a notice by Prof. John Locke, in his *Report on the Mineral Lands of the United States*, presented to Congress in 1840.

The account of the monuments of the Southern States is also compiled from the

descriptions and delineations of other writers; but these chiefly in manuscript, and therefore not generally known to the public.

In some respects the earthworks of the South are comparatively of minor interest, because they are less varied in form and less anomalous in character than those of the middle region, and because they are to a considerable extent explained by the usages of the people existing when Europeans entered the country. On the other hand, their numbers, their magnitude, and the necessary labor of their execution, render them equally objects of surprise and curiosity, if they lack, in any degree, the bewildering attraction of vagueness and mystery.

In closing their remarks upon what they have investigated and described, these gentlemen wisely refrain from drawing many general conclusions. They regard the antiquity of the ancient monuments of the Mississippi valley as manifested by their position beyond the latest formed terraces of the river banks, by the exceedingly decayed state of the skeletons in the mounds, and by the age of the trees upon them that are in no way distinguishable from the primitive forests. They think it clear that the population must have been numerous, and essentially homogeneous in customs, habits, religion, and government; that as their remains are almost entirely confined to fertile valleys, or productive alluvions bordering on lakes and streams, that circumstance, in connection with their nature and extent, necessarily implies the derivation of sustenance from agriculture, involving also such particulars of manners and customs as are incident to stationary and agricultural life; and they venture to suggest that the facts collected point to a connection, more or less intimate, between the race of the mounds and the semi-civilized nations of Mexico, Central America, and Peru.

While Messrs. Squier and Davis were completing their general survey of the antiquities of the United States, Mr. Schoolcraft published his "Notes on the Iroquois."¹

Next to the valley of the Ohio, no other northern section of the Union presents so great a number and variety of aboriginal remains as the State of New York; and no other native race has been found to possess so much of warlike energy, capacity of organization for combined effort, and profound national policy, as the Iroquois. Their celebrated confederacy, first of five, then of six nations, their systematic plans of conquest, their sagacious management of the fruits of victory, their high-toned manliness of character, their eloquence, their decision and tenacity of purpose, have given a peculiar interest to their history. How far the evidences of former conflicts—the fortified enclosures, and defensive parapets, so frequent in western and northwestern New York, and extending even to more interior localities—are to be explained by their warlike and aggressive habits, has always been a matter of uncertainty and debate. Reference has already been made to inquiries that have, from time to time, been directed, sometimes by eminent citizens of the State, towards the materials of archæological information existing within its limits.

Mr. Schoolcraft was at pains to collect the statistics of the ancient and present

¹ Notes on the Iroquois; or Contributions to American History, Antiquities, and General Ethnology. By Henry R. Schoolcraft, Albany, 1847.

condition of the Iroquois population ; and to gather from facts and traditions whatever information could be obtained of their origin and history, the principles of their government, their religious ideas and ceremonies, their arts and sciences, and their military enterprises. To these he added archæological investigations respecting the structures and relics that are found upon their ancient seats.

Whether the traditionary tales of *Cusie*, the chronicler of his race, or any of the poetical legends preserved by Mr. Schoolcraft, have in them gleams of historical truth, or no, is a point on which opinions are divided. They have, at least, served to fire the genius of one of our most accomplished poets ; and the Lay of Hiawatha, "the Iroquois Quetzalcoatl," has been transferred from the cabin of the savage to the drawing-rooms of literature and fashion, like a captive Indian maiden, with as much of native decoration, and as little of artificial costume, as the conventionalities of civilized taste would permit.

" With the odors of the forest,
With the dew and damp of wigwams,
With the rushing of great rivers,
With its frequent repetitions,
And their wild reverberations
As of the thunder of the mountains."

The "Notes" of Mr. Schoolcraft constitute a comprehensive treatise, uniting all the varieties of illustration, historical, topographical, philological, and anecdotal, that might serve to elucidate his subject ; while vestiges of former arts and labors receive a prominent share of consideration and representation.

The aboriginal remains of New York were, however, deemed of sufficient importance to justify a more special and thorough exploration ; and this was subsequently accomplished by Mr. Squier, under the joint auspices of the Smithsonian Institution and the Historical Society of the State.¹

Without dwelling on the particulars of his investigation, we may remark that, after examining many, and taking a general observation of others, he estimated the number of works in New York to be two hundred, or two hundred and fifty, all of which he considered to have been intended for defensive purposes. Mounds are not included in this enumeration ; and as they are not connected with the mural structures, but are uniformly sepulchral, and similar to the tumuli not unfrequently raised by existing tribes, they were not regarded as deserving special attention. They are said to be far from numerous, and to owe their origin, probably, to the custom, common to many tribes, of collecting, at fixed periods, the bones of their dead, and depositing them together, with solemn ceremonies.

It is stated that the enclosures are marked by great similarity of position, and are, for the most part, small, including from one to four acres, though sometimes embracing as many as sixteen acres ; that the embankments are slight, and the ditches shallow, the former varying from one foot to four feet in height ; and that

¹ Aboriginal Monuments of the State of New York. Comprising the results of Original Surveys and Explorations, with an Illustrative Appendix. By E. G. Squier, A. M. Smithsonian Contributions, Vol. II.

there appears to be entire uniformity in conditions of occupancy, and in remains of art within their walls. It is represented that these relics of art and traces of occupancy are absolutely identical with those which mark the forts and fortified towns occupied by Indians within the period of historical records.

"All the facts and coincidences," says Mr. Squier, "go to show that if the earth-works of western New York are of remote date, they were not only *secondarily*, but *generally* occupied by the Iroquois, or neighboring and contemporary nations, or else—and this hypothesis is most consistent and reasonable—were erected by them. * * * I am driven to the conclusion that they were erected by the Iroquois or their neighbors.

"Except so far as they illustrate the system of defence practised by the aboriginal inhabitants, and show that they were, to a degree, fixed and agricultural in their habits, they have slight bearing upon the grand ethnological and archæological questions of the country."

And yet—and here is food for reflection—we learn from the drawings and descriptions that, while enclosures of a sacred or ceremonial character, with their accompaniments, are wanting, the mural remains of New York bear a striking resemblance to those of Northern Ohio; and, with less of symmetry, less expenditure of labor, and general inferiority of size, do not differ materially in form and structure from works of defence ascribed to the ancient race. Many of them are now covered with heavy forests; and the suggestion of Mr. Squier, that it may not have been essential to the purposes of the builders that the forests should be removed, cannot be more applicable to them than to others, especially as he speaks of trees, from one foot to three feet in diameter, standing upon the embankments, and in the trenches. The relics they yield, though characterized as such as are known to have been common among the Iroquois, exhibit a near affinity to those of the same class from the western mounds. The vases are described as of very good material, and worked and ornamented with considerable skill and taste; the pipes as often fancifully moulded, some bearing the forms of animals, whose distinctive features are well preserved, others in shape of human heads, of fine quality and well burned; some, indeed, so hard, smooth, and symmetrical, as almost to induce doubts of their aboriginal origin. The terra-cottas, other than pipes, are also pronounced to be very creditable specimens of art.

The *Appendix*, in this publication, is of greater length than the memoir to which it is attached; and treats more or less fully, with frequent illustrative drawings, and much evidence of research, upon many points of general archæological interest essential to a comprehensive view of the subject of American antiquities. For the convenience of readers seeking information, the titles of its contents are here subjoined in a note.¹

¹ Contents of Appendix to Aboriginal Remains of New York, viz: Ancient works in Pennsylvania and New Hampshire. Character of Indian defences. Defences of the ancient Mexicans and Peruvians. Comparison of the defensive structures of the American Aborigines with those of the Pacific Islanders, Celts, etc. Construction of mounds by existing Indian tribes. Sepulchral mounds in Mexico, Central America, etc. Sepulchral monuments of the ancient world. Probable funeral rites of the

An opportunity of indulging in comparisons, and drawing inferences from analogies, to which the author and his colleague, Dr. Davis, felt it imprudent to yield while recording their observations, was thus afforded to Mr. Squier; and many interesting collateral facts, as well as many instructive coincidences, are added to their more strictly limited narrations.

The region between Lake Michigan and the Mississippi, now constituting the State of Wisconsin, had hitherto been comparatively unexplored for archæological purposes; although known to present some peculiar features, and to possess remains of a singular and distinctive character.

Works intended for defence, and such as are apparently designed for religious or sacrificial ceremonials, are there seldom found; but structures of no great elevation, though often on a scale of considerable horizontal extent, representing a variety of fanciful forms, are frequent along the courses of the streams, and by the borders of the lakes.

The figures are described as chiefly those of Lizards, Turtles, Birds, Bears, Foxes, and Men; combined with straight lines, angles, crosses, curves, and other simple embankments. Whatever these may have been intended to portray, there is a uniformity in their configuration which manifests that the outlines are not accidental, but possessed to their makers a distinct and definite meaning.

They appear to be confined within a limited territory, between the Mississippi and Lake Michigan; not extending far below the southern line of Wisconsin, nor much beyond the northern extremity of Lake Winnebago; and diminish in numbers and variety as the two last named boundaries are approached.

That they exist there, and there only, is a fact hardly less remarkable than the anomalous nature of the works themselves; and attention is naturally directed to the physical peculiarities of the district where they are found.

Wisconsin is marked by no great or sudden variations of surface. The hills are seldom more than gentle swells or undulations of land; the highest ridges being those that separate the rivers which run to Lake Superior from those that flow into the Mississippi. At certain points the waters of opposite streams sometimes mingle at high floods, and the portages are always short and easy. In general the flow of the rivers is even and sluggish, expanding, especially on the eastern side of the State, into a profusion of shallow basins, or forming lakes of larger dimensions. Yet, springing from cold and limpid fountains, these are free from miasma and exuberant with wholesome animal life. The fishes are of the finest flavor; and the wild rice that chokes the shallower, and lines the borders of the deeper waters, affords sustenance to myriads of aquatic birds and beasts, that fatten upon the abundance of nutritious aliment. Even the most wet and marshy districts are said not to be productive of fogs or humid exhalations. The air is clear,

Mound-Builders. The Mounds not general burial-places; Great Indian cemeteries. Aboriginal sacred enclosures; Temples of the North American Indians; of the Mexicans, Central Americans, and Peruvians; of the Polynesian Islanders, Hindus, etc.; Primitive temples of the British Islands; Symbolism of temples. Stone-heaps; Stones of Memorial, etc. Additional monuments in New York. Use of copper by the American Aborigines. Use of silver.

dry, and healthful; the climate milder than that of the interior of New York; both summer and winter are tempered by the vicinity of the great lakes; and the season and the soil are favorable to vegetation.

It may be assumed, therefore, that the seat of these remarkable works is well adapted to the support of a numerous population, supplying, as it does, the means of savage comfort, and even luxury, without the necessity of laborious exertion. A nation so located, sheltered on three sides by great bodies of water, and favored with such facilities for interior communication, we might expect to find maintaining its independence, and cultivating arts or founding institutions which would leave numerous and distinguishable traces behind them. Yet, the emblematic monuments excepted, no prominent relics have been discovered. The remains of protective, and of ceremonial enclosures, the usual evidences of stationary population, are almost entirely wanting; and only the mounds of more recent date appear to contain the ornaments and utensils so commonly placed in the graves of the aborigines.

Though one of the youngest States, Wisconsin is among the oldest historical regions of the Union. Before the Pilgrims landed at Plymouth, the French missionaries ascended the Ottawa River from the St. Lawrence, and advanced towards the Great Lakes; and before Boston was settled they had established posts in the neighborhood of Lake Michigan. In 1639, Nicolet, the interpreter, explored Green Bay, ascended Fox River, and embarked on the Wisconsin. Thirty-four years later, Marquette and Jolliet, following in his steps, completed the discovery and exploration of the Mississippi. Thus the rivers and lakes of Wisconsin were made memorable by first opening the way to the interior of the West.

Another circumstance of antiquarian interest is connected with the territory bounding on Lake Superior. The copper mines, that have recently attracted so much attention, are supposed to have been wrought at some distant period by the natives. It has even been conjectured that they were the source of supply to the whole aboriginal population of the country north of the Gulf of Mexico; and that remote tribes were accustomed to send deputations to these localities, or obtained the metal by traffic with natives nearer the mines. Mr. Schoolcraft has suggested that the region may have been consecrated to neutrality like that of the celebrated pipe-stone quarries, and that parties of different tribes, thus secured from molestation, may have assembled there at certain seasons to procure their supplies of ore.

The reports of Dr. Jackson, Messrs. Foster and Whitney, and others, employed by Congress as topographical and geological surveyors, afford curious accounts of the evidences of ancient operations observed by them. They found not only masses of native copper from which portions had been rudely severed, but excavations in the solid rock, apparently wrought with great labor, with the simple implements of the savage—the tools with which they had worked lying near in large quantities.

There may, however, be some danger of confounding the results of the labors of Europeans at the mines, with those of the natives. As early as 1632, the existence of the mines was known to the French; for they are mentioned in the narrative of Gabriel Sagard, printed at Paris in that year; and they must have

been frequently visited by traders, who may have endeavored to detach from their beds some of the masses now bearing the marks of such efforts. As any tools of iron that might be left behind would be eagerly seized by the Indians, it is hardly to be expected that such should be found in the vicinity.

At any rate, at a later period, yet so long ago as 1771, an English company under Alexander Henry, was employed for a time at the forks of the Onontagon river; and it may not always be easy to distinguish the operations of the unassisted Indian, anterior to the arrival of the whites, from those of later date, when the labors of the two races may have been combined or contemporaneous. Still, it is said that excavations bearing marks of extreme antiquity not to be mistaken, are found in several localities; and that great quantities of metal must have been obtained from the surface alone; fully warranting the opinion, strengthened by native tradition, that, from periods of unknown remoteness, the aboriginal inhabitants of a large extent of country obtained their copper ornaments and utensils from that quarter.

When first made known to the whites, Wisconsin was occupied, in part, by two tribes, the Winnebagoes and the Menomonies, not only distinct from one another, but differing materially, in important circumstances, from others in their vicinity. Carver tells us, that while with the Winnebagoes he employed himself in collecting the most certain intelligence of their origin, language, and customs; and, from the information obtained, he came to the conclusion that they originally resided in some of the provinces belonging to New Mexico. Mr. Schoolcraft, in his narrative of Gov. Cass's expedition, describes them as a "savage and bloodthirsty tribe, who came many years ago from the South, and are related to some of the Mexican tribes."

The supposed discovery of the remains of an ancient city in the valley of Rock river, within the territory of the Winnebagoes, gave rise, at one period, to much speculation, which, on the other hand, would make the Mexicans to have been emigrants from Wisconsin. The name of *Aztalan* was given to the imaginary city, in the belief that it must be the place referred to in the traditions of the Aztecs, which represent their ancestors as coming from a country at the north, near large bodies of water, and called Aztalan from that circumstance. Later investigations, however, have not confirmed the original marvellous statements of the discoverers; and the place is chiefly to be regarded as furnishing the only instance, among the numerous works in Wisconsin, of an *enclosure* in some degree analogous to those which in other States are supposed to be intended for religious purposes.

The territory south of Lake Superior, which includes the State of Wisconsin and a small portion of Michigan, certainly possesses no little archæological interest. Its striking physical features are associated with many early incidents of romantic adventure; it is the seat of mineral treasures towards which the desires of a whole continent of barbarous tribes might converge, and may have been rendered sacred by that circumstance; and, moreover, its aboriginal monuments are anomalous and strange, appearing not so much like structures for any sacred or civil purpose, as like hieroglyphic or symbolic characters. If instead of being clustered on the surface of the earth they had been drawn on rocks and stones, efforts would be

made to read them as records. They would derive a superior interest from the supposition that they are, as has been suggested, the "totems" of tribes, perhaps memorials of amity or alliance, written upon the ground where adverse nations were accustomed to meet in peace. It must be confessed that pictorial writing on so immense a scale, with a sovereign state for a tablet, is a phenomenon unparalleled in monumental history.

The great horizontal dimensions of these effigies, raised but a few feet above the surface of the ground, was doubtless the reason why they failed to arrest the attention of travellers at an early period; their forms not being always perceptible from a single point of view, and sometimes only developed by the measurements of the surveyor.

It has been remarked that they were observed first by Mr. Lapham, in 1836. In 1850, that gentleman entered into an arrangement with the American Antiquarian Society, and, on behalf of that institution, commenced a thorough archæological survey of the State. His notes and drawings, when completed, were transferred to the Smithsonian Institution, and constitute a portion of the volume of Contributions published in 1855.¹

The ordinary mounds were found to possess no peculiar interest; except that a few of them, even as far north as Lake Superior, have the pyramidal truncated form, common at the South, and, in the Middle States, confined to sacred enclosures, where they are regarded as altars, or the sites of temples. The emblematic tumuli were seldom seen in isolated positions, but usually in groups, with a mound at some elevated point, commanding a view of the whole. They yielded no relics to illustrate the habits and arts of their builders, or the design of their construction.

We have had frequent occasion to mention the publications of Mr. Schoolcraft, who has been foremost among pioneers in the investigation of Aboriginal History, and is now the chronicler of its ultimate results. A reference to the labors in which he is still engaged will appropriately conclude this bibliographical epitome.

Under an act of Congress, of March 3d, 1847, the Secretary of War was required "to collect and digest such statistics and materials as may illustrate the history, present condition, and future prospects of the Indian tribes of the United States;" and the fulfilment of this duty was committed to the charge of Mr. Schoolcraft.

By the plan of execution adopted, the several points of investigation were divided into numerous heads or titles; and minute questions in relation to each, framed for the purpose of eliciting information, were distributed, in the form of a circular, throughout the country.

The results of these inquiries, combined with documents in possession of the government, and the editor's private stores of experience and observation, have been arranged under a series of distinct titles, that are continued through the published volumes; each title embracing the portion of new matter that falls to its share, while new titles are occasionally created, when required by the nature of the materials.

¹ "The Antiquities of Wisconsin, as Surveyed and Described, By I. A. Lapham, Civil Engineer, &c., On behalf of the American Antiquarian Society."

These *collectanea* are necessarily of a miscellaneous, and not always entirely consistent character, and are liable to a good deal of repetition. Whether they are to have no other than their present documentary form, or are to be digested in a future volume, has not been announced. In the mean time, through the various communications and compilations of which the work is composed, a current of editorial opinion is permitted to flow, that, to a careful reader, may sufficiently indicate the general conclusions which the aggregate of information is deemed to justify.

Under the title of ANTIQUITIES, some new surveys have been registered, and fresh information collected, especially respecting remains at the South, and relating to rocks bearing sculptured marks and figures. Implements, utensils, ornaments, and fabrics, are minutely described and illustrated; and, in this and other connections, the number and variety of archæological elements embodied in the volumes are too great to be particularized. They comprehend comparisons of ancient and modern arts and customs; the traditionary legends of the natives; the scientific deductions of naturalists; philological analyses and classifications; and, in brief, whatever else has been supposed in any way to pertain to the subject. Throughout all departments of the work admitting of exemplification, the artist and the engraver have profusely distributed the highest efforts of their illustrative skill.

It has been less necessary, and less desirable, to notice particularly, in previous pages, the numerous publications of Mr. Schoolcraft during his protracted study of Indian history, because the wide range of these national volumes may be presumed to embrace his latest knowledge, and his matured reflections, on all points to which his attention has at any time been directed. We may gather, from the different connections in which his views are expressed, some prominent examples that will disclose their general nature and tendency.

While frequently admonishing the reader of the little reliance to be placed upon Indian *traditions*, they are still received as legitimate; if sometimes deceptive; elements of opinion; and generally, in the hypotheses that are framed, have more or less of weight attached to their evidence. As they have played no part of much importance in our narrative thus far, it is of more interest to observe the degree of consideration they receive from Mr. Schoolcraft.

Speaking of the origin of the natives, he says: "Thus we have traditionary gleams of a foreign origin of the race of the North American Indians; from separate stocks of nations, extending, at intervals, from the arctic circle to the valley of Mexico. Dim as these traditions are, they shed some light on the thick historical darkness which shrouds the period. They point decidedly to a foreign, to an oriental, if not a Shemitic origin." (Vol. I, p. 26.)

On page 199 of Vol. IV. he says, in reference to the *Eries*: "The veil that conceals their history is lifted in a curious, ill-digested, and obscure pamphlet of Indian traditions, by a semi-educated Tuscarora (Cusic), which was printed in the ancient country of the Iroquois in 1825."¹

In adverting to the Iroquois traditions recorded by Cusic, that refer to the

¹ Sketches of the Ancient History of the Six Nations. By David Cusic.

mounds and fortifications of the West as the works of the southern and western tribes—which, “after long and bloody wars, that are conjectured to have lasted for centuries,” were overcome by the Algonco-Iroquois confederacy—although remarking that the chronology and dynastic terms of Cusie’s pamphlet are believed to be conjectural or faulty, he says: “That the ancestors of the Iroquois had been parties in this ancient war against the southern intruders, or Allegans, may be inferred. . . . The epoch of these old and general wars, so obscurely yet certainly pointed to, is deducible chiefly from the state of the archaeological vestiges.” (Vol. IV. p. 137, and Vol. V. p. 63.)¹

Again, alluding to western earthworks, he remarks, “The fullest consideration of the Indian history and character denotes these works to have been built by aboriginal hands. That these beginnings of an Appalachian Indian empire were finally frustrated by the surrounding barbarous tribes, is denoted by the few traditions recorded. It fell, we may affirm, by division, anarchy, and mutual distrust, &c.” (Vol. IV. p. 148.)

Again: “We may, on the most enlarged view which can be taken on the subject, recognize in the mounds, earthworks, and mural monuments of the Mississippi valley, the results, and final extinguishment of that impulse towards civilization which was commenced by the Toltees of Mexico. It cannot be inferred, from our present survey of the languages, that large numbers of the Toltees mingled in this exodus of tribes from the interior of Mexico into the northern hemisphere; but the movement which led to their downfall in the twelfth century, and gave the sovereignty to the Aztecs, appears, from monumental indicia, to have impelled them northward and eastward, disturbing other tribes impinged on in their progress towards Florida and the Mississippi valley, and across the Appalachian range into the Atlantic slopes. The traditions of the tribes, even of central New England, point to such a migration. They came from the southwest. Their traditions place in the southwestern tropical regions the residence of the benevolent god, from whom they affirmed that they had derived the gift of the *zea maize*. The Leno Lenapes had also a distinct tradition of their origin in the south and west, and of their crossing the Mississippi river. The Shawnees trace themselves to Florida. The Winnebagoes have a tradition that they came from Mexico. The whole Algonkin family, till the mass of continually dividing tribes reached the confines of New England, trace their origin south and west. The Muscogeas assert that they came from the Red river valley, west of

¹ Considering the limited period to which Indian traditions, when fairly tested, have generally been found to extend, these legends of Cusie might not unreasonably be accounted for without referring their origin to a distant date. The English title to a large portion of the eastern valley of the Mississippi, was founded on a purchase from the Six Nations, who claimed to hold it by right of conquest; and the alleged era of that conquest is fixed at about the year 1664, when the Iroquois are said to have “carried their arms as far south as Carolina, and as far west as the Mississippi, over a vast country, which extended twelve hundred miles in length, and about six hundred in breadth; where they destroyed whole nations, of whom there are no accounts remaining among the English.” This claim, which Great Britain was as much interested to sustain as the Six Nations were to make it, General Harrison endeavors to refute in his *Historical Discourse*. See, also, Butler’s *Hist. of Kentucky*, ch. 1.

the Mississippi. The ancient Chigantalgi, whom De Soto found on the east banks of the Mississippi, as high as the Yazoo, had the worship of the sun established with all the fixity and rites of the Toltecs. From these we date the Natches, who still at the period of their overthrow by the French retained the art of mound-building, two of which structures they erected in the Ouichita (Wachita) valley. The large mound developments formerly existing on the Kaskaskia and Cahokia rivers in Illinois, display traits of the Toltecan arts of building, and of their religion and mythological ideas. The ancient displays at Marietta, at the mouth of the Muskingum, the circular walls of Circleville, and the striking remains on Paint creek, the Little Miami, and in the Scioto valley generally, all within the limits of Ohio, have the same air and traits of the southern element worshippers." (*Ibid.*, 147-8. See also Vol. V. p. 61.)

The above citations are selected as serving to illustrate Mr. Schoolcraft's manner of employing native traditions as materials of evidence, and also as in part exhibiting his views on some leading archæological questions. The authority of traditions is in fact recognized incidentally, if not directly, throughout the work; and the inquiry suggests itself whether he does not make, and whether there should not be made, a distinction between traditions that have been long known to be current in tribes and larger divisions of the Indian race, and such as have only the warrant of individual testimony. There are, doubtless, national legends that have been transmitted through generations of savages with a view to the preservation of some historical truth. It is equally true that individuals among them have the habit of inventing tales founded upon questions asked them, and in accordance with what they conjecture to be the expectation of the inquirer, which they are often very quick to discern. It is, therefore, extremely important that careful discrimination should be exercised respecting the sources of traditions, and the nature of the authority on which they rest. If Mr. Schoolcraft would draw the line so that it should be as evident to the reader as it is perhaps to himself, greater justice might be done to the merit of this kind of testimony.¹

Mr. Schoolcraft has thrown much light on another archæological element of great interest, that of Indian inscriptions, or pictography. The ideographic devices and symbols of the natives are very elaborately explained and illustrated in his volumes; and it is shown that the aborigines have a hieroglyphic and pictorial system of considerable power in the conveyance of ideas. It appears, from his account, that the Algonkins have a form of symbolic characters called "Kekeewin,

¹ Even statements like the following are insufficient to guard the reader from the danger of misapprehension:—

"Aboriginal history, on this continent, is more celebrated for preserving its fables than its facts. This is emphatically true respecting the hunter and non-industrial tribes of the present area of the United States, who have left but little that is entitled to historical respect. Without any mode of denoting their chronology, without letters, without any arts depending on the use of iron tools, without, in truth, any power of mind or hand to denote their early wars and dynasties, except what may be inferred from their monumental remains; there is nothing in their oral narrations of ancient epochs to bind together, or give consistency to, even this incongruous mass of wild hyperboles and crudities." (Vol. I. p. 13. See also *Ibid.*, p. 65, Vol. III. p. 314, etc.)

i. e. *teachings*," which prevails among the tribes from the Atlantic to the Mississippi. Having become acquainted with a highly intelligent chief, who was familiar with the use and signification of those characters, Mr. Schoolcraft put himself under his instructions, and subsequently employed him to decipher the inscription on the Dighton Rock.

This chief (Chingwauk) accordingly took the volume containing the various delineations of those figures to his lodge, and studied it with some of his companions. The next day, he appeared with two of his brethren, one of them acting as his principal assistant, and in the presence of an approved interpreter and two members of Mr. Schoolcraft's family, all well versed in the Chippewa and English languages, the explanation was given.

The inscription was determined to be of a kind practised by "an ancient class of seers, and termed "*Muz-zin-na-bik* (*i. e.*, rock writing)," and was attributed to "the ancient Wa-be-na-kies, or New England Indians." It was said to relate to two nations, both Indian, and that none of the figures denoted a foreigner; but the record had reference to a battle, and was made by the triumphant party. The details of this exposition are minutely illustrated, and the force or meaning given to each particular mark explained.

For some reason, which he did not mention, Chingwauk confined himself strictly to the drawing made by Dr. Baylies and Mr. Goodwin, in 1790. There were some characters which he threw out, as having no significance. Two of these were among the number interpreted by the Danish antiquaries; three others connected with them could be spared from Chingwauk's reading without impairing its sense; and Mr. Schoolcraft inferred, at that time, that these were due to the Northmen, and perhaps had given the hint to the natives, at a later period, to record their own traditions on the same stone. (Vol. I. p. 108, *et seq.*)

In 1853, a new copy was taken from the rock, under his own supervision, by the daguerreotype process; and from this he decided that the inscription was entirely Indian, without those traces of Runic letters and Roman figures which were thought to be discernible in former drawings. (Vol. IV. p. 120.)

An inscribed rock on Cunningham's island, near the southern shore of Lake Erie, described as the most extensive and best preserved inscription that has been found (which we imagine to be the same that the missionary Kirkland noticed in 1788) has also been interpreted by Chingwauk. In this case, the events recorded are explained as having occurred since the arrival of Europeans, whose *hats* are drawn among the figures. (Vol. II. p. 88, Vol. III. p. 85.)

As these pictorial sculptures have a marked family resemblance wherever they are found, throughout the United States, they may fairly be ascribed to the same people, even if they belong to different eras.

Mr. Schoolcraft has, in former times, given his opinion very decidedly in favor of the genuineness of the "Grave Creek Stone," having communicated respecting it with various learned societies abroad and at home. He still regards it as belonging to a class which he denominates "INTRUSIVE ANTIQUITIES." He says, "An inscription, in apparently some form of the Celtic character, came to light in the Ohio valley in 1838. This relic occurred in one of the principal tumuli of

western Virginia (the ancient Huitramannaland). It purports to be of an apparently early period, namely 1328.¹ It is in the Celtiberic character, but has not been deciphered. Its archæology appears corroborative of the Cimbrian and the Tuscarora traditions, representing a white race in the Ante-Columbian periods in this part of America." (Vol. IV. p. 118.)²

Although Mr. Schoolcraft does not admit that any race, except the true aboriginal one, has erected any of the monuments of the country, he refers, occasionally, to indications of foreign presence that may have left an impression upon the arts of the people. "There may also be forms of art, disinterred from American soil, introduced from Asia, or by early adventurers from the Mediterranean, which have tended to direct the Indian mind to incipient steps of art or civilization. But these vestiges only serve to perplex, without unravelling the subject." (Vol. V. p. 85. See also *Ibid.*, p. 115.)

Vague intimations of this kind are apt to excite the imagination, and to mislead it. We should be glad to see gathered into one chapter, under an appropriate head, all the evidences of art beyond the ability of the natives, that must be assigned to an ante-Columbian period, and all other indications of a foreign people, before that era, in the United States. They cannot be numerous, and the point is of sufficient importance to be distinctly presented, with all the force it possesses. They have hitherto proved unsubstantial whenever we have attempted to grasp them. We have before us the "Alabama Stone," found, some thirty years ago, near the Black Warrior river, which has been described as containing the following inscription in Roman letters—³

HISRNEHNDREV.

1232.

To our eyes, it reads, HISPAN. ET IND. REX. as plainly as the same inscription on a Spanish quarter of a dollar that is somewhat worn. The figures may be as above represented, but of course they cannot be intended for a date.

We have seen the "Rutland stone," on which "the strokes, filled with a black composition," resemble remarkably a regular series of literal characters; but they were formed by the same hand that formed the stone, and are only freaks of crystallization.⁴

¹ Judging from the age of a tree on the mound. The stone has no date.

² This much controverted relie is a hard piece of sandstone in an irregular elliptical shape, an inch and three-fourths in length, and an inch and a half in breadth, having upon it three lines of characters, apparently alphabetic, which M. Jomard thought to be Libyan, while other European archæologists have considered them nearer to the Phœnician, the Old British, or the Celtiberic. No one professes to interpret their meaning. Its claims to notice rest entirely upon the assertion of the owner and excavator of the Grave Creek Mound, that it was found in the heart of that tumulus. It is stated, in opposition to its authenticity, that its discovery was not mentioned at the time of the excavation, nor until the mound and its contents were used as an exhibition. If genuine, it is at least unique, and is unsupported by any similar or analogous relie. *Trans. of Am. Ethnol. Soc.*, Vol. I. *Ibid.*, Vol. II. Articles by Mr. Schoolcraft and Mr. Squier.

³ *Western Messenger*, May, 1838.

⁴ *ANTIQUITATES AMERICANÆ*, p. 360.

We received, a year or two since, a careful drawing of a piece of foreign copper money, found, in the interior of Ohio, in digging a well; and happened to have its exact counterpart among a collection of *modern* oriental coins.

We have at hand Jewish phylacteries that were taken from beneath the soil in a country village, where, it was declared, Jews were never known to have been; but a follower of Moses was ultimately traced to the very spot where these were found.

We have the following inscription, discovered, according to most respectable authority, on a plate of mica upon the breast of a skeleton, buried after the ancient manner, in a mound near that at Grave Creek, from whence the more celebrated *inscribed stone* was derived.¹

"Trem Nebo, thou who did Dy for me
and my son Jero and wife peto.
1587. William Welch."

Our faith has not, thus far, been strengthened by sight; and we should be at a loss to form a list of evidences pointing to the presence of an ancient people of foreign origin at any mysterious period of time, or to collect a series of traditions worthy to be presented as possessing an historical value. It is not less desirable that all claims of the kind, having a shade of plausibility, should be by some one assembled for investigation, however frequently, in particular instances, they may have proved to be fallacious.

Mr. Schoolcraft's views of the antiquities of the United States are often emphatically expressed—

"The aboriginal archæology has fallen under a spirit of misapprehension and predisposition to exaggeration. The antiquities of the United States are the antiquities of barbarism, and not of civilization. Mere age they undoubtedly have; but it must require a heated imagination to perceive much, if anything at all, beyond the hunter state of arts, as it existed at the respective eras of the Scandinavian and Columbian discoveries." (Vol. I. Introduction.)

"There is nothing, indeed, in the magnitude and structure of our western mounds which a semi-hunter and semi-agricultural population, like that which may be ascribed to the ancestors or Indian predecessors of the existing race, could not have executed. The interior of these earthy pyramids has disclosed nothing beyond a rude state of the arts, or, at best, such arts of pottery and sculpture, shell-work and stone implements, as are acknowledged to belong to the hunter or semi-hunter races before they or their descendants had fallen into their lowest state of barbarism, or that type in which they were found by the colonists between 1584 and 1620. There is little to sustain a belief that these ancient works are due to tribes of more fixed and exalted traits of civilization, far less to a people of an expatriated type of civilization, of either an ASIATIC or EUROPEAN origin, as several popular writers very vaguely, and with little severity of investigation, imagined." (Ibid., p. 62.) "It is a mistake to suppose that the pipe-sculptures of the Scioto valley—the

¹ From James E. Wharton, Esq., Editor of the Wheeling Times and Gazette.

ancient capital of Indian power in the Ohio valley—evince a state of art superior to the general aboriginal type.” (Vol. IV. p. 141.)

“The birds of prey and reptiles, chiselled chiefly from sandstone, found buried in the small altar-mounds of the Scioto valley, constitute a feature in this forest sculpture which is not at all at variance with other evidences of the sort from the hunter age of America.” (Vol. IV. p. 142.)

Of the animal or emblematical mounds of Wisconsin, he says: “Their connection with the existing Totemic system of the Indians who are yet on the field of action, is too strong to escape attention. By the system of names imposed upon the men composing the Algonkin, Iroquois, Cherokee, and other nations, a fox, a bear, a turtle, &c. is fixed upon as a badge or stem, from which the descendants may trace their parentage. To do this, the figure of an animal is employed as a heraldic sign or surname. This sign is called, in the Algonkin, town-mark, or Totem. A tribe could leave no more permanent trace of an esteemed sachem, or honored individual, than by the erection of one of these monuments. They are clearly sepulchral, and have no other object but to preserve the names of distinguished actors in their history.” (Vol. I. p. 52.)

“The totemic mounds are the simplest structures of all. Their object seems to be, by raising mounds on the prairies, with a peculiar mineralogic pictography, to create a symbolic record which shall be understood by their countrymen. They constitute a species of symbolic mounds. Nothing could be more characteristic of these people, or within the means and power of being comprehended by the hunter tribes, than those earth-formed pictographs. It is antiquity adding its voice to modern Indian history.” (Vol. IV. p. 128.)¹

The opinion of the editor respecting the uses of the mounds and enclosures of the Ohio valley corresponds very nearly with that of Messrs. Davis and Squier. He connects the sacrificial altars with the religious habits of modern Indians. “That offerings were made by fire by the mound-builders, as well as by the existing race of Indians, is clearly shown. An altar of earth, not very imposing in height or circumference, was made by them from the loose earth. Here the people could freely make their offerings to the officiating jossakeeds, which appeared to have consisted most commonly of the pipe, in which incense had been offered, and which was probably, from its ordinary and extraordinary uses, one of the most cherished objects in the household. It is probable, from the number of these altars in the Scioto valley, that it had a dense population. By long use, the bed of loam or earth composing the altar would become hard, and partake, in some measure, of the character of brick. What circumstance determined its disuse we cannot say. It is certain that, in the end, the fire was covered up, with all its more or less burned and cracked contents, and the earth heaped up so as to bury it most effectually, and constitute a mound.” (Vol. I. p. 52.)

¹ Whatever explanation of the object of these mounds may be derived from the native custom above referred to, the inquiry remains, Why are they almost wholly confined to a comparatively limited region? They might be expected to exist wherever the totemic custom prevailed. The latest investigations have shown, as stated by Mr. Lapham, that they are *not* sepulchral.

According to his classification, mounds may be considered as tumuli proper, (meaning the larger class of mounds, termed *sepulchral* by Davis and Squier); propylæ, or redoubt mounds, at the gates of enclosures, barrows or small earthen heaps, generally under nine or ten feet in height; the small "sciotic" mounds of sacrifice; the totemic or imitative mounds; and the massive platform mounds of the South.

The purposes to which the latter were applied, he considers as sufficiently shown by the manner in which they were used and occupied within the period of observation, viz: for the dwellings of the caciques and priests. To this is added the testimony of tradition. "With regard to the platform mounds, it is the recorded tradition of the Muscogees, and Appalachian tribes, that these were public works laid out on the selection of a new site for a town, and engaged in immediately by the whole tribe, to serve as the official seat of their chief ruler." (Vol. IV. p. 130, quoting from Pickett's *History of Alabama*, and Vol. II. pp. 83, 84.) The celebrated work at Marietta he believes to have also been of the same character.¹

"In Oregon and Washington," he says, "there is not a mound or earthwork analogous to those of the Mississippi Valley, or, indeed, of any kind." "The tribes who had reached the Mississippi in their migrations, did not come from the elevated, bleak, and barren deserts stretching at the east of the Rocky Mountains. There are no indications that they crossed that broad and forbidding barrier." (Vol. V. pp. 100, 101, and authorities there cited.) (Ibid., Appendix, p. 662, *et seq.*)

In further limitation of the extent of such remains, he says: "In the highest latitudes occupied by the Algonkins, on and north of the Lake Superior basin, we search in vain for any striking objects of antiquity. There are no artificial mounds, embankments, or barrows, in this basin, to denote that the country had been anciently inhabited. It is something to affirm, that the mound builders who have filled the West with wonder—quite unnecessary wonder—had never extended their sway here." (Vol. I. p. 66.)

Mr. Schoolcraft has, in various passages, expressed an opinion respecting the period when the mounds, &c. were abandoned.

"Could we determine the age of these works, one great object of their consideration would be attained. The opening of the great tumulus at Grave Creek revealed the mode which brought structures of earth of this capacity within the means of the semi-industrial tribes. The cortical layers, counted in the mature and heavy forest trees, denoted the period of its completion to have been at, or soon after, the twelfth century; but there was no proof that it had not been commenced centuries earlier. It appeared, conclusively, that the structure was the result of comparatively trivial sepulchral labors during an immense period; one age and tribe having added to another the results of its easily accomplished and slowly accumulating toils." (Vol. IV. p. 129.)

"The testimony drawn from the cortical layers of trees on an antique fort in

¹ Reference is made, Vol. II. p. 127, to a Creek tradition respecting the construction of *mounds of refuge* from sudden inundations.

Adams County, Ohio, denoted the twelfth century as the period of its abandonment." (Ibid., p. 130.)

"The cortical annular layers in the growth of large and mature trees, occupying the walls and interior areas of the abandoned works, tell a tale, of which we must judge from tumuli, and fortified camps and towns. These data indicate parts of the twelfth and thirteenth centuries as the active period of tumult among the Mississippi Valley tribes." (Vol. IV. p. 137.)

"It is true, that data derived from the monuments of the Mississippi Valley and of Florida, denote the early part of the twelfth century to have been an epoch of great changes and disturbances in that quarter. Of these ancient wars, the traditions of the Iroquois, as recorded by Cusie, and by Ducoigne, both native authorities, represent a period of great ancient wars and disturbances in the Mississippi Valley. But a view of Western antiquities denotes that the wars referred to cannot be located further back than about six hundred years." (Vol. V. p. 61.)¹

It is a theory of Mr. Schoolcraft, that the arrival of the Aztecs in Mexico, about 1190 (as indicated by their pictorial scrolls), and the dispersion of the Tolteicans, created a general movement in different directions, and that some of the latter pressed northwardly and eastwardly. "It is most reasonable to suppose," he says, "that the ancient population of the Mississippi Valley, and thence, in process of time, of the Atlantic coast and plains south of the great lakes, was thus derived." Hence the knowledge and general use of the maize, or Indian corn, &c. (Vol. I. p. 63.)

He is disposed to look for the primitive origin of the American race in the remotest periods of time.

"It must be recollected as one of the fundamental points in our antiquities, that the Indian tribes are of an age that is very antique—that they have occupied various parts of the continent, not only for centuries, but, probably, for scores of centuries." (Vol. I. p. 62.) "Where such a race may be supposed to have had their origin, history may vainly inquire. It probably broke off from one of the primary stocks of the human race before history had dipped her pen in ink, or lifted her graver on stone. Herodotus is silent; there is nothing to be learned from Sanconiathus, and the fragmentary ancients. The cuneiform and Nilotic inscriptions, the oldest in the world, are mute. Our Indian stocks seem to be still more ancient. Their languages, their peculiar idiosyncrasy, all that is peculiar about them, denote this." (Vol. I. pp. 16, 17.)

"Considered in every point of view, the Indian race appears to be an old, a very old stock. Nothing that we have in the shape of books, is ancient enough to recall the period of his origin but the sacred oracles. If we appeal to these, a probable prototype may be recognized in that branch of the race which may be called Almogic (from Almodad, son of Joctan), a branch of the Eberites." (Ibid., p. 17.)

¹ In his paper on the "Grave Creek Mound," *Trans. Am. Ethnol. Soc.*, Vol. I., Mr. Schoolcraft suggested that the pestilence of the year 1330, which swept from Tartary and China through India into Europe, might have prevailed in America (as did the cholera of 1832, which was also of Eastern origin), and have destroyed entire bands of the Red race. In the same paper, he speaks of being "impressed with the belief that the common trenches, fortifications, and defenced mounds of the Ohio Valley," are of the era of the wars of the ancient Alleghanians with the ancestors of the Iroquois.

“Thousands of years must have elapsed to produce such diversities of languages and character, and general obscurity. Instead of eighteen hundred years, as the apocryphal Spanish pictographs presuppose as the period of their roving in these forests, there is more probability that the period of their abiding on the continent is thrice that time.” (Vol. V. p. 69.)

Mr. Schoolcraft has no very high estimate of the value of the picture writings of Mexico, and thinks the loss of those destroyed by the Spanish ecclesiastics not so great as might be expected. He quotes Mr. Gallatin's statement, that those which have been preserved contain but a meagre account of Mexican history for one hundred years preceding the conquest, and hardly anything that relates to prior events. (Vol. V. p. 102.)

The pictographic scrolls often commented upon as betokening an inkling of Christianity among the natives, he regards as undoubtedly of a date since the conquest. The supposed existence of traditions of the Deluge, in both North and South America, he apprehends to be due to the “fervor of imagination, or the enthusiasm of theory.” While there are no traces of the Christian scheme to be found among the Indian tribes, and no Hindoo element in their population, no relics of Buddhism or Brahminism, or Mahomedanism, “their manners and customs present some traits which denote them to be the descendants of a more ancient race whose opinions and dogmas once overspread the oriental world.” “There are evidences of the ancient prevalence of the worship of the sun throughout America.” (Vol. V. pp. 62, 63.)

Elsewhere he says: “Any attempt to fix on local divisions of the oriental world as the probable theatre of the origin of the Indian tribes, in the absence of all history—without even traditions, poor as they generally are—and on the mere basis of suppositions, must prove unsatisfactory. But where history is baffled, conjecture may sometimes plausibly step in.” “The only nation, it must be confessed, with which his (the Indian's) origin has been, with some just probability, compared, is the Hebrew, or at least the Shemitic stock. There are not only some striking principles of agreement in the plan of utterance of the Indian with the Shemitic, but some apparent vestiges of the vocabulary.” (Vol. V. pp. 86, 87.¹)

¹ Some of the preceding sentences have been transposed for convenience of quotation, but without affecting their sense or connection. In a note the writer says, “The Hebraic theory has not been, in my opinion, thoroughly examined. The attempt of Mr. James Adair, in 1774, to prove it, by customs and languages, is an utter failure on the face of it.” On p. 82, Vol. V., he refers to the arguments of President Smith, and Boudinot, on this point, as unsatisfactory, and to the Discourse of Dr. Jarvis questioning the theory as “deemed a paper of sound deduction.” He directs the attention of the reader to Vol. I. pp. 30 to 43, for a summary of traits which appear to connect the Indian with the oriental world; and to Vol. II. p. 353, and Vol. IV. p. 386, for some evidences for a comparison of the Indian with the Hebrew language. But it is intimated that the subject requires more time, reading, and elaboration, than the nature of this work admitted. He says, in the same connection, “It has likewise, thus far, been impossible, in this volume, to bring forward, in a digested form, the comparison of manners, customs, rites, and opinions, social and religious, which appear to refer the origin of the Indian tribes to an ancient and general epoch of political mutations over a wide surface of the Asiatic continent, affecting the Mongol, Chinese, and their affiliated nations.” Vol. V. p. 82.

We are conscious of the difficulty, if not the impropriety, attending an effort to collect from an unfinished work the views of its author. In a compilation like that required of Mr. Schoolcraft by the United States government, a passing commentary may often represent only an impression suggested by the subject as regarded from a particular stand-point; and while anxious to add to our summary the results of his long and varied investigations, there is a risk of error in undertaking to designate his deliberate and ultimate conclusions.

We have therefore merely selected a few passages bearing upon some of the chief points in the history of opinion, and its progress towards a solution of prominent questions, without expecting to give any just idea of the nature or extent of the valuable information and learned discussions comprehended in the archæological portion of his volumes.

CHAPTER III.

CONCLUSION.

IN the preceding pages we have endeavored to select and condense, from a mass of miscellaneous notes, such materials as would illustrate the views entertained at different periods, and by various writers, upon subjects relating to the archæology of the United States.

This has been done under whatever disadvantages are incident to the circumstance of having portions of the text printed before other portions were written. Had opportunity and leisure been afforded for revision of the entire paper, changes and additions might have been made that would have been likely to improve the consistency as well as the completeness of the narrative.

After a consideration of statements and speculations that have failed to present a harmonious result, the mind naturally craves the satisfaction of being able to distinguish acknowledged verities from data that are problematical, if it is only for the sake of some solid basis on which to build new theories, or some fixed point from which future investigations may take their departure. The reader will doubtless expect to be assisted in an effort to separate matters of fact from inferences and hypotheses, by a recapitulation of the principal points that have been with reasonable certainty established.

We shall endeavor, while glancing rapidly along the course of inquiry, to ascertain in what direction, and to what extent, the way is tolerably clear and the path tolerably firm.

The comparative geological antiquity of the two hemispheres is accounted by some an element of weight in estimating the probabilities of an indigenous population on this continent. It is a point, however, that cannot be determined in the present stage of geological observations. If we admit that portions of the western continent exhibit appearances of an earlier emergence than is known to be indicated elsewhere, it might still be true that the mass of the eastern hemisphere was sooner developed, and sooner prepared for the habitation of man. But until it is generally accepted as a fact by scientific men that America really has claims to priority of age, the assertion is, at any rate, entitled to no more than the rank of an hypothesis.¹

The discovery of human skeletons in a fossilized state, might, under the first

¹ "There exists no reason for assuming that one side of our planet is older or more recent than the other." Humboldt, "Views of Nature," p. 106.

impression, be received as conclusive evidence of the presence of mankind in what are called the geological periods. The petrified condition of remains whose place in the rocky tablet of the earth's chronology is not beyond the reach of question, is, however, often to be explained by the rapid growth, under certain circumstances, of calcareous, silicious, and other mineral formations; while the great and sudden changes of level, produced by terrestrial convulsions and elemental influences, afford a solution of the mystery of many deep deposits beneath the soil.

The association of human bones with those of extinct species of animals, observed by Dr. Lund in the caves of Brazil, has been attributed to accidental causes. A comparatively modern date has also been assigned for the disappearance of many species of animals that have ceased to exist. The remains of the megatherium and the mastodon are found near the surface of the earth, in the United States, and do not exhibit signs of having been rolled by floods, or seriously disturbed by commotions. From the stomach of a mastodon, disinterred, at no great depth, from the mud of a small pond in Warren County, New Jersey, were taken seven bushels of the vegetable substances on which it fed, resembling the young shoots of the white cedar, still a common tree in our forests. The bones of the nearly complete specimen from Newburg, New York, purchased by the late Dr. John C. Warren, contain a considerable portion of their original gelatine, and are firm in texture. A megatherium, exhumed while digging the Brunswick Canal, was so near the surface that the roots of a pine tree penetrated its bones. Sir Charles Lyell has shown that the fresh-water and land shells, lying, in some cases, *beneath* such remains, are of the species now living in the same region; so that their climate could scarcely have differed very materially from that now prevailing in the same latitudes. In another passage, speaking of extinct quadrupeds, he says: "That they were exterminated by the arrows of the Indian hunter, is the first idea presented to the mind of almost every naturalist."¹

An account is given of a mastodon found in Gasconade County, Missouri, which had apparently been stoned to death by the Indians, and then partially consumed by fire. The pieces of rock, weighing from two to twenty-five pounds each, which must have been brought from the distance of four or five hundred yards, "were," says the narrator, "evidently thrown with the intention of hitting some object." Intermixed with burned wood, and burned bones, were broken spears, axes, knives, &c., of stone. "The fire appeared to have been largest on the head and neck of the animal, as the ashes and coals were much deeper there than on the rest of the body." "It appeared, by the situation of the skeleton, that the animal had sunk with its hind feet in the mud and water, and, being unable to extricate itself, had fallen on its right side, and in that situation was found and killed, as above described; consequently, the hind and fore-feet, on the right side, were sunk deeper in the mud, and thereby saved from the effects of the fire." "Between the rocks that had sunk through the ashes were found large pieces of skin, that appeared like fresh tanned sole-leather strongly impregnated with the lye of the ashes, and a great many of the

¹ "A Second Visit to the United States," II. pp. 270, 271; I. pp. 234, 258-9.

sinews and arteries were plain to be seen on the earth and rocks, but in such a state as not to be moved, excepting in small pieces, the size of the hand, which are now preserved in spirits."¹

In a chapter on "Traditions respecting Extinct Species," Col. Smith remarks, that the bones of the megatherium, in Brazil, are on or near the surface, in a recent state. "Now," he continues, "could they have resisted disintegration during four or five thousand years, considering these to have lain exposed to, or at least within, the influence of a tropical sun and the periodical rains? Yet they often occur on the surface, and the bones of the pelvis have been used for temporary fire-places by the aborigines, wandering on the pampas, beyond the memory of man. In North America, there are native legends which indicate traditional knowledge of more than one species. Such is that of the great Elk or Buffalo, which, besides its enormous horns, had an arm protruding from its shoulder, with a hand at the extremity (a proboscis). Another, the *Tugesho*, or *Yagesho*, was a giant bear, long bodied, broad down the shoulders, thin and narrow about the hind quarters, with a large head, powerful teeth, short and thick legs, paws with very long claws, body almost destitute of hair, except about the hind legs; and therefore called 'the Naked Bear.' Further details are furnished by the Indians, which, allowing for inadequate terminology, incorrectness in tradition and translation from the native dialects to English, leave a surprisingly applicable picture to a species of *megatheridæ*, perhaps the *Jeffersonian megalonyx*. The colossal Elk, another name for the mastodon, or *Père aux Bœufs*, points out, that with designations of existing species, the Indians describe extinct animals with a precision which, in their state of information, nothing but traditionary recollections of their real structure could have furnished."²

Thus the bones of men and non-existent species of animals may be admitted to be contemporary without supposing that either perished previous to the chronological period.

So great advances have recently been made in Physical Geography, that we are able to determine, with reasonable accuracy, not only the probability of arrivals on the American coasts from the eastern continent, before the age of Columbus, but the points to which vessels would be driven, and the regions from whence they would be most likely to come.

³To present in a few words a general idea of the currents and prevalent winds of the ocean, let us suppose the earth at rest, and the equatorial regions continually heated by the sun in his diurnal revolutions. In this condition, a continuous current of air from the north, and another directly opposite from the south, would blow towards the equator, there ascend and flow backward above toward the poles. If we next suppose the earth to be in motion on its axis from east to west and compound the effects of this motion with that of the winds towards the equator on either side, they will not meet directly opposite each other, as in the previous sup-

¹ American Journal of Science and Arts, Vol. XXXVI. pp. 199, 200.

² Nat. Hist. of the Human Species, pp. 104-5.

³ This sketch of the currents of the ocean we give on the authority of the Secretary of the Smithsonian Institution.

position, but in an acute angle, and produce a belt of wind from east to west entirely around the earth in the region of the equator. The continued action of this wind on the surface of the water would evidently give rise to a current of the ocean in the belt over which the wind passed. If, now, instead of considering the earth entirely covered with water, we suppose the existence of two continents extending from north to south, so as to form two separate oceans similar to the Atlantic and Pacific, then the continuous current to the west we have described would be deflected right and left at the western shore of each ocean, and would form four immense whirlpools, viz: two in the Atlantic, one north and the other south of the equator, and two in the Pacific similar in situation and direction of motion. The regularity of the outline of these whirls will be disturbed by the configuration of the deflecting coasts, the form of the bottom of the sea, as well as by islands and irregular winds. Such is a very general view of the tendencies in the direction of motion of the principal currents of the ocean.

The great whirl in the north Atlantic, the western and northern portions of which are known as the Gulf Stream, passes southward down the coast of Africa, crosses the ocean in the region of the equator, is deflected from the northern portion of South America and the coast of Mexico along the United States, and recrosses the Atlantic to return into itself at the place where it started. A portion, however, of this current, probably owing to the configuration of the bottom, passes off in a tangent to the circumference of the great whirl, and flows northward along the coast of Ireland and Norway. The great whirl of the south Atlantic may also be considered as starting from the coast of Africa, crossing the Atlantic, passing down the coast of Brazil, and again recrossing the ocean at the south to near the Cape of Good Hope, and then returning to the place of original departure.

In like manner, the primary currents of the north Pacific Ocean may be described as an immense irregular whirl, the longer axis of which is in an easterly and westerly direction. Starting from the west side of Central America, it passes along the tropical region, across the ocean, then flows northerly past Japan, returns in the vicinity of the Aleutian Islands, and down the coast of Oregon and California to the place of starting. A similar, but perhaps less perfectly defined, current may be traced in the south Pacific.

The winds follow the same general law. Their prevailing direction, as we have before stated, is from the east toward the west in a belt of several degrees in width on either side of the equator, while in the northern and southern latitudes, between 40° and 60° the tendency of the wind is easterly.

A slight consideration of the foregoing views of the currents and winds of the ocean will render the fact evident, that bodies floating on the eastern shore of the Atlantic, near the equator, will tend to move in a westerly direction towards the American continent, and that bodies in higher northern and southern latitudes will move in an easterly direction, towards the coasts of Europe and Africa; that in the Pacific the currents near the equator tend to carry floating masses from the continent of America, and, in higher north and south latitudes, to bring them to its shores. For example, if a body be cast into the axis of the Gulf Stream, it will tend to move along the curve of the current towards the Cape De Verd Islands, or

to be deflected by the tangential current we have mentioned to the coast of Ireland or Norway.

Besides the parallel currents we have mentioned, there is a narrow polar current from Baffin's Bay passing in part between the Gulf Stream and the American coast, and which probably bore the Icelandic navigators to Labrador and to New England.

"From present knowledge of currents, we can hardly be justified in the supposition that South America was peopled from Asia by vessels being driven south of the Equator to the American shores. The distance by that route (west-wind region south of the S. E. Trades) is not less than 10,000 miles without any islands, except New Zealand, for a resting place. The route by the Aleutian Islands, with the North Pacific 'Gulf Stream' is a much more probable route."¹

From the foregoing view, it appears that both the winds and the currents favor an approach to this continent; and there seems to be no reason in the nature of things why both oceans may not from time to time have poured their casual and perhaps irreclaimable contributions on our shores.

Not many instances have been recorded of chance arrivals upon the European coasts from the western hemisphere. Some however may be mentioned in connection with a few illustrations of the general tendencies of the ocean currents.

Humboldt says: "There are well authenticated proofs, however much the facts may have been called in question, that natives of America (probably Eskimaux from Greenland or Labrador) were carried by currents or streams from the northwest to our own (the eastern) continent. James Wallace relates that in the year 1682 a Greenlander in his canoe was seen on the southern extremity of the Island of Eda by many persons, who could not, however, succeed in reaching him. In 1684, a Greenland fisherman appeared near the Island of Westram. In the church at Burra, there was suspended an Eskimaux boat which had been driven on the shore." "In Cardinal Bembo's *History of Venice* I find it stated, that in the year 1508 a small boat manned by seven persons of a foreign aspect was captured near the English coast by a French ship. The description given of them applies perfectly to the form of the Eskimaux. Six of these men perished during the voyage and the seventh, a youth, was presented to the king of France."²

The men called *Indians* that appeared on the coasts of Germany in the tenth and twelfth centuries, and the stranded dark-colored men given to Metellus Celer by the king of the Suevi (see ante, p. 7) are supposed to have been natives of Labrador. The corpses of men of a peculiar race, having very broad faces, are said to have confirmed Columbus in his belief of the existence of countries situated in the west.

The mainmast of the English ship of war, the *Tilbury*, which was destroyed by fire near St. Domingo, was carried by the Gulf Stream to the northern coasts of Scotland; and casks of palm oil from the wreck of an English ship on a rock off Cape Lopez, in Africa, were carried to Scotland, having followed the equinoxial

¹ Schoolcraft's *Hist. and Prosp.*, &c. I. pp. 23-6.

² "Views of Nature," p. 123.

current from east to west between 2° and 12° north latitude, and the Gulf Stream from west to east between the latitudes 45° and 50°, north. Of two bottles, cast out together, in south latitude, on the coast of Africa, one was found on the Island of Trinidad; the other on Guernsey in the English channel. Another bottle, thrown over off Cape Horn by an American master, in 1837, was picked up within a few years on the coast of Ireland.

In A. D. 1500, Pedro Cabral, while on his way from Portugal to the East Indies, was driven to the coast of Brazil, which he thus accidentally discovered. In 1731, a batteau from Teneriffe came ashore near the mouth of the Orinoco. In 1797, the slaves in a ship from Africa rose upon the crew, who leaped into a boat and cut it adrift. At the end of thirty-eight days the survivors were cast upon Barbadoes. In 1799, six men in a boat from St. Helena lost their course, and after being a month at sea, and resorting to cannibalism, as was the case in the previous instance, four of them reached the South American coast alive.

To account for the population of the islands of the Pacific, Sir Charles Lyell has collected examples of the drifting of parties of savages to very great distances in their frail canoes. In one case, eight months are reported to have been passed on the broad ocean, with no other sustenance than the fishes they caught, and the rain water they found means to secure. It is remarked, in the same connection, that "the space traversed, in some instances was so great, that similar accidents might suffice to transport canoes from various parts of Africa to South America, or from Spain to the Azores, and from thence to North America."¹

It seems necessary to concede that casual passages from the eastern to the western continents have been possible in very rude ages; and at whatever periods human enterprise has ventured to leave the immediate proximity of the land, before the arts of navigation were assisted by the compass, the probability of their occurrence must have been great.

There is within the American continent no deficiency of evidence tending to confirm the présumptions that rest on maritime facts and principles. The natives of Hispaniola are said to have intimated to Columbus that a *black people* lived south and southeast of them.² According to Peter Martyr, Balboa, in 1511, found "*blackamoors*" on the isthmus of Darien.³ Torquemada says the Californians signified to Viscaino, in 1602, that there was a village of negroes not far from their neighborhood.⁴ A race of very *white* Indians was said to exist in Brazil.⁵ Hum-

¹ Principles of Geology, II. pp. 57-58. Mr. Gallatin was accustomed to assert that the Pacific Islands were populated at a far more recent period than the American continent, as evinced by their languages, and hence could not have contributed to the primitive occupation of this country. In one place, he says, "Their colonization is of a date so comparatively recent that the Malay origin of the inhabitants of Otaïti and the Sandwich Islands was immediately recognized when their vocabularies were first brought to Europe. It seems probable that some of these people may have reached the main land of America; but they found the country inhabited, and either were killed or became mixed with the ancient inhabitants. No trace of the Malay language is found on the western shores of America." —*Trans. of Am. Ethnol. Soc.*, I. p. 176.

² Herrera, I. 374.

⁴ Venega's Hist. of California, p. 239.

³ Third Decade, p. 97.

⁵ Southey's Hist. of Brazil, I. 289.

boldt speaks of "several tribes of a whitish complexion" in the forests of Guiana.¹ Legendary references to bearded men, with a white skin, arriving from the sea, are common to both the northern and the southern continents. Diversities of color and of physical conformation, and traces of foreign influence supposed to be detected in arts, customs, language, religion, and astronomical science, too numerous to mention, are often cited in proof of intercourse with inhabitants of the other hemisphere before the arrival of Columbus.

But all these evidences fall short of sustaining the probability of intentional colonization. They do not even suggest the arrival of men in any considerable numbers, or by other than accidental means. They imply the previous presence in the country of a native population, in whose language, arts, and physical attributes, all foreign traits have been merged almost to extinction. However frequent foreign accessions may have been, they have not had power to affect materially the structural uniformity of speech and physical conformation, and the homogenous mental type, of the aboriginal inhabitants.

It may be inferred, from observations upon the land, as well as from the phenomena of the sea, that the casual voyagers who, in ancient times, have crossed the breadth of either ocean to our shores, were in small and feeble parties, last survivors of tempest and famine, and without women to perpetuate their race. They appear to have brought no agricultural productions from their native regions, and to have taught none of the useful arts of civilized industry. According to the laws that determine the transmission of hereditary qualities in the crossing of breeds, all traces of foreign ancestry might, under these circumstances, disappear in a few generations.

These remarks are applicable to arrivals that may be supposed to have taken place from the western shores of the eastern hemisphere, and across the middle and southern latitudes of the Pacific; but in the northern regions, where the two continents are brought almost into contact, there are other circumstances to be considered.

The practicability of voluntary passages to America, at an early period, by way of Iceland and Greenland, has been demonstrated by the Northmen; but we are unable to produce any well-established facts going to show that this practicability has ever been followed by results affecting the population of the country. We are, indeed, justified by the present aspect of the question in assuming that the Scandinavians have left no marks of residence, linguistic, physical, or monumental, to prove that they have, primarily or secondarily, been important contributors to the peopling of the New World.

The probability of permanent settlements from the Pacific side of the eastern hemisphere, near Behring's Strait, has the support of more positive indications.

The Aleutian Islands, about fifteen degrees south of the Strait, appearing on the map like stepping-stones from one continent to the other, are admirably adapted to facilitate communication between the two countries. The diminished space to be traversed, the protective proximity of the islands, a climate mild for the latitude,

¹ Political Essay, I. 144.

and a plentiful supply of fish and game, are favorable, not to chance passages merely, but to intentional and continuous transits. The opposing shores are in fact occupied by divisions of the same tribe;¹ and the neighboring regions of Asia are held by that variety of mankind whose physical characters are nearly identical with those of the American race. These are circumstances that, of themselves, give plausibility to the theories which point to that quarter as the place where inhabitants were originally, and have been consecutively, transported to this continent. Those theories also derive some confirmation from the traditions and pictorial records of the southern nations, referring to a pilgrimage of their ancestors from the northwest.²

There are also some striking ethnological analogies which seem to connect these distant sections. The Peruvian practice of flattening the skull by compression, as a mark of nobility, is a prominent peculiarity of the tribes on Columbia River. There, too, prevails the singular and inconvenient custom of inserting disks of wood in the lips and ears, found again in Brazil;³ and, in the dialects of the Columbians and Nootkas, may be observed that distinguishing characteristic of Mexican words, the terminal *tl*.⁴

But beyond a few such coincidences, the evidence of connection does not extend. Though often imagined, vestiges of migration from the north to the south have not been satisfactorily traced. Mr. Bartlett, while at the head of the United States Boundary Commission, gave much attention to this subject; an inquiry for which his previous ethnological studies had given him interest and preparation. "I have been unable," he says, "to learn from what source the prevailing idea has arisen of the migration of the Aztecs, or ancient Mexicans, from the north into the valley of Mexico, and of the three halts they made in the journey thither. I confess I have seen no satisfactory evidence of its truth."

"The traditions which gave rise to this notion are extremely vague, and were not seriously entertained until Torquemada, Boturini, and Clavigero gave them currency. But they must now give way to the more reliable results of linguistic comparisons. No analogy has yet been traced between the language of the old Mexicans and any tribe at the North in the district from which they are supposed to have come; nor in any relics, ornaments, or works of art, do we observe a resemblance between them."⁵

¹ The sedentary Tchuktchi.

² Mr. Prescott, in his treatise on the origin of Mexican civilization, after considering the weight due to various affinities of arts, customs and dialects, remarks: "The theory of an Asiatic origin for Aztec civilization derives stronger confirmation from the light of *tradition*, which, shining steadily from the far northwest, pierces through the dark shadows that history and mythology have alike thrown around the antiquities of the country. Traditions of a western or northwestern origin were found among the more barbarous tribes, and by the Mexicans were preserved both orally and in their hieroglyphic maps, where the different stages of their migration are carefully noted. But who at this day shall read them? They are admitted to agree however in representing the populous North as the prolific hive of the American races."—*Conquest of Mexico*. Appendix, p. 397.

³ Mr. Ewbank suggests that the term Oregon or Orejones was bestowed by the Spaniards on account of the custom of preternaturally enlarging the ears.—*Life in Brazil*. Appendix, p. 459.

⁴ Vater thought he detected words of common origin in the vocabularies of these widely separated peoples.—*Mithridates*, theil III. abtheil. 3. p. 312.

⁵ Personal narrative of Explorations, &c., II. p. 283.

There are no antiquities in Oregon.¹ On the route from thence, there are no monuments or other works of art, such as the southern nations have left in their ancient seats, until the northern limits of a reflux influence are attained. And it is equally true that there are none of the traits of Chinese, or Japanese, or Tartarian semi-civilization, which emigrants from those nations might be expected to have brought with them.²

Affinities which have no *united* reference to any particular nation, but point now to one people, and then to another totally distinct from the first, and, in a third case, to others equally disconnected, however numerous they may be in the aggregate, tend, by their diversity, to weaken the force of each individual analogy as an evidence of origin, and can only serve to illustrate the possibility of accidental and partial communications. If congruous affinities, of a positive character, should be found in some detached locality, they might seem to indicate descent from a special stock; but claims to distinctive derivation, founded on such evidence, are opposed by the linguistic and physical proofs of a general unity of race throughout the entire continent.

If a feature in the customs, institutions, or dialect, of a particular tribe, or of many tribes, has a resemblance to some feature in the customs, institutions, or language, of any well-known historical people (the Jews for example), before receiving it as a proof of connection, or as an inheritance, a reason may be required why other features, more likely to be retained, are wanting; and even if many such features are adduced, unless a decided national impress accompanies them, adventitious causes may afford an explanation, which, if not entirely satisfactory, will often correspond to the real importance of the problem.³

Thus, if able philologists have shown the existence of certain general principles or phenomena in the languages of America, which are peculiar and characteristic, uniting them together, and distinguishing them from other languages; and if able anatomists have become assured of physical traits in the American aborigines which justify their classification as a separate variety of man; exceptions which may be pointed out in either case do not necessarily impair the soundness of their general conclusions. For exceptions may, with plausibility, be attributed to causes that

¹ Letter from George Gibbs, Esq., Indian Agent, to Mr. Schoolcraft.—*Hist. and Prosp.*, &c., Vol. V. Appendix, p. 662.

² Some minor arts, or handicrafts, may be traced, perhaps, to Asiatic sources. A letter from the "Alta Californian," quoted by Dr. Bachman, states that the writer obtained from Queen Charlotte's Island some specimens of native sculpture, which struck him as resembling the sculptures of the Japanese; and on taking them to Japan, they were claimed at once as Japanese articles, without any remark directing attention to them. (*Charleston Med. Journal* of July, 1855, p. 527.) As Japanese junks have sometimes been cast on the coast of California, articles derived from thence may have been imitated by the natives.

³ No practice less likely to have a natural origin can be produced than one that has prevailed among some tribes in Brazil and Guiana. At the birth of a child, the husband is put to bed, and nursed with great care for a certain period, while the mother goes about her ordinary concerns. Yet the custom is alluded to as having existed among the ancient Cantabrians, the people of Congo, certain Tartars visited by Marco Paulo, the ancient Corsicans, and in the southern French provinces.—*McCulloh's Researches*, p. 99.

are accidental, and applicable only to particular instances; and although philological and physiological affinities with other races should be equally well established, the argument drawn from radical peculiarities and idiosyncrasies may still remain unsubverted, so long as the latter are paramount.

If, in the process of reasoning, a lapse of time, whose duration cannot be defined, and an isolation without material interruption, are admitted as probabilities, the comprehensive deductions of leading European ethnologists need not of necessity conflict with those of investigators in this country, which, while claiming that the American aborigines are a distinct and peculiar people, do not deny the primitive unity of the human race.

The Chevalier Bunsen, in his recent *Philosophy of Universal History*, remarks: "It is not yet proved in detail, but it appears highly probable, in conformity with our general principles, that the native language of the northern continent of America, comprising tribes and nations of very different degrees of civilization, from the Eskimaux of the polar regions to the Aztecs of Mexico, are of one origin, and a scion of the Turanian tribe. The similarity in the configuration of the skull renders this affinity highly probable."

Having subsequently to writing the above seen the first three volumes of Mr. Schoolcraft's national work, he adds: "But the linguistic data before us, combined with the traditions and customs, and particularly with the system of pictorial or mnemonic writing (first revealed in that work) enable me to say, that the Asiatic origin of all these tribes is as fully proved as the unity of the family among themselves. According to our system, the Indian languages can only be a deposit of a north Turanian idiom. The Mongolian peculiarity of the skull, the type of the hunter, the Shamanic excitement, which leads by means of fasting and dreams into a visionary or clairvoyant state, and the fundamental religious views, and symbols, among which the tortoise is not to be forgotten, (II. 390.) bring us back to primitive Turanism. As to the languages themselves, there is no one peculiarity in them which may not easily be explained by our theory of the secondary formation and the consequences of isolation. The verity of the grammatical type was long ago acknowledged, but we have now (as I think) the evidence of the material, historical, physical unity. The Indian mind has not only worked in one type but with one material, and that a Turanian one." (Vol. II. pp. 111-13.)

"We thus see that a very considerable part of the inhabitants of America, and the Polynesian Islands, belong to that one great family which we call the Turanian race, and that the former travelled off from the Mongolian, and the latter from Malay tribes." (Ibid., pp. 115.)

"The first, however, to trace with a bold hand the broad outlines of the Turanian, or as he called it, the Scythian philology, was Rask. He proved that the Finnic had once been spoken in the northern extremities of Europe, and that allied languages extended like a girdle over the north of Asia, Europe, and America. In his inquiries into the origin of the Old Norse, he endeavors to link the idioms of Asia and America by means of the Grönland language, which he maintains is a scion of the Scythian or Turanian stock, spreading its branches over the north of America, and thus indicating the antediluvian bridge between the con-

continent of Europe and America. According to Rask, therefore, the Scythian would form a layer of language extending in Asia from the White Sea to the valleys of Caucasus, in America from Grönland southward, and in Europe (as Rask accepts Arndt's views) from Finland as far as Britain, Gaul, and Spain. This original substratum was broken up first by Celtic inroads; secondly by Gothic; and thirdly by Slavonic immigrations; so that traces appear like the peaks of mountains and promontories out of a general inundation." (Vol. I. p. 272-3.)¹

As the affinities claimed in the above extracts are not those of verbal signification but grammatical construction, the classification of American languages with those comprehended in the term *Turanian* amounts simply to this; that the structure of the former exhibits that stage of advancement from an inorganic, or monosyllabic dialect, which is indicated by the system of *agglutination*; in other words, it belongs to the oldest *organic* stage.²

The admitted order of development in forms of speech appears to be 1st, the *monosyllabic*, or *inorganic*, of which the Chinese and the "so called Original People," in the Malayan Peninsula, furnish examples;³ 2d, the *agglutinated*; 3d, the *inflected*, or highest form. But while this division corresponds with the relative antiquity of the three forms, ethnologists do not agree in supposing the last to have necessarily, in all cases, passed through the two previous stages.⁴

According to Prof. Müller's translation of grammatical conclusions into historical language, the first migration from the common centre of mankind proceeded eastward, where the Asiatic language was arrested at the first stage of its growth, and where the Chinese, as a broken link, presents a reflection of the earliest consolidation of human speech. The second dispersion was that of the *Turanian* tribes, who went in two divisions, Northern and Southern. In the first division are comprehended the Tungusic, Mongolic, Tartaric, and Finnic branches. In the second the Taic, Malaic, Bhotiya, and Tamulic branches. He supposes that these divisions had not attained to any social or political consolidation before they were broken up into different colonies; that they broke up, carrying away each a portion of their common language—and hence their similarity; but they possessed as yet nothing traditional, nothing like a common inheritance in language or thought, and hence their differences. In secluded districts these differences would ultimately "change the whole surface of grammar and dictionary." The American

¹ Prof. Müller, in his "*Last Results of Turanian Researches*." Bunsen, I. p. 484, says:—

"The Greenland language has been pointed out as showing a transition into American dialects; and the researches of physical science have already indicated the islands east of Siberia as the only bridge on which the seeds of Asia could have been carried to the New World."

Yet neither Rask nor Müller intend to imply that Greenland is to be considered a route of migration from Europe, as the islands referred to were from Asia. The mixed character of the Greenland language is otherwise explained.

² The *Turanian* dialects share one thing in common—they all represent a state of language before its individualization by the Arian and Semitic types.—Max Müller in Bunsen's *Phil. of Un. Hist.*, II. 476.

³ Pickering's *Races of Men*, Bohn's edition, p. 305.

⁴ Bunsen, *Phil. of Un. Hist.*, I. p. 283.

dialects are adduced as an exemplification of the principle that if the work of agglutination has once commenced, without any literature to keep it within limits, the languages of tribes separated only for a few generations will become mutually unintelligible. (Bunsen, *Phil. of Un. Hist.*, I. 480, *et seq.*)¹

It thus appears that a common element required by philological theories, whether European or American, respecting the origin of population in this country, is *time*—no less than all the time that history can grant; and while they go back nearly to the most primitive form of human utterance for a matrix in which the American system of speech might have been cast, they demand for the special development of that system, and the peculiar phenomena it exhibits, a protracted term of isolation. (See *ante*, pp. 63–4.)

A like duration of separate existence would go far to explain the *physical* peculiarities and idiosyncrasies of the American race. A divergence from their kindred types would seem to be the inevitable result of disconnection for ages, under different influences, moral and material; and while changes of conformation might be philosophically anticipated, the fact that a wild and savage life tends to promote physical uniformity, as domestication and civilization tend to produce variety, may suffice to account for the common direction those changes have taken.

And having the element of *time* granted, we may go behind the commencement of Chinese, Japanese, and other forms of Mongolian culture, and imagine the ancestors of our aborigines to have been still mere wanderers, without arts, and with no religious faith save the primitive oriental worship of the Sun. While the parent stock upon the eastern continent would attain to whatever development it might reach under circumstances not entirely excluding it from being acted upon and instructed by other races, the offshoot in America would experience no external

¹ The anonymous author of a recent treatise possessing a high degree of literary and scholastic merit, draws the following conclusions from his studies and observations.

“That the first stock of man was created in the equatorial region of Africa; * * or in other words, that the true negro, the aboriginal inhabitant of Nigritia, is the primary variety of our species.

“That from the Nigritian stock, in regions equi-distant from the equator, sprang the Hottentots and the Chinese; whose striking mutual resemblance has been remarked by the accurate Barrow. And that from the Chinese sprang all the Mongolian, or Turanian races, extending from the limits of the Malayan region, through Asia and Europe to the coldest limits of the habitable earth, and through the *American continents*, pervading every zone of climate.

“That the Malayan variety, judging from physical and philological evidences together, sprang from a branch of the Mongolian or Turanian Stock nearly allied to the Chinese.

“That the Caucasian variety was brought into existence after all the other varieties mentioned above had become developed; commencing with Adam, the man created in the image of God.” (*The Genesis of the Earth and Man: A critical examination of passages in the Hebrew and Greek Scriptures, chiefly with a view to the solution of the question whether the varieties of the human species be of more than one origin; &c. &c.* Edited by Reginald Stuart Poole, Edin., 1856.)

“Dr. Prichard, Mr. Pickering, and Hamilton Smith, are of opinion that the African was the primitive form and race of man, and that all the others are divergences from this earliest type; while Dr. Bachman thinks the probability in favor of the supposition that the primitive form and color was intermediate between the African and white races; and that these are therefore variations equally removed from the original.” (Smyth’s “Unity of the Human Races,” p. 264.)

influences but those of Nature, and would possess as a basis of advancement only the native instincts, and possibly a few traditions, of its race.

In this manner time and isolation, which are regarded as indispensable to one division of the problem, may be made to answer the exigencies of other divisions; and whatever is wanting to account for exceptional facts or circumstances may be supplied by the supposition of waifs from other nations, occasionally cast upon these shores.

Leaving the question of origin where the latest opinions place it, among the enigmas of immemorial time, we turn to a brief summary of the archaeological facts that have been disclosed by investigation within the United States.

The characteristic antiquities of the United States are confined within certain limits. They are scanty through the entire range of the Atlantic States. A mound of some elevation on the Kennebec, in Maine, and vestiges of enclosures at Sanbornton, and near Concord, New Hampshire, are all that can be named in New England, and few of any importance are in the eastern portions of the country elsewhere. In New York they are more numerous, especially towards its western borders. Beyond the Alleghanies, and east of the Mississippi, they extend from the Great Lakes to the Gulf of Mexico; and occupy in greater or less numbers the southern regions towards the Atlantic as far as the Carolinas. They are also found on the promontory of Florida. West of the Mississippi they have been seen on the Missouri 1300 miles from its mouth; and are said to exist on the rivers Kansas and Platte. They are also known to be on some of the principal streams in Louisiana. In Texas they have not attracted attention as prominent features of the country.¹

The earthworks are of two classes, viz: *enclosures* and *tumuli*. The enclosures are of various sizes and forms. Some are of no greater dimensions than the ordinary circumference of an Indian Council House; others are sufficiently extended to include a village. Some are evidently defensive, occupying positions of natural strength, and adapted to the nature of the ground in a manner to promote security from attack; but, in most cases, requiring the additional protection of palisades, or parapets of timber. Others have the appearance of being intended for ceremonial or religious purposes, or designed for sports and games.

The tumuli are of various forms, conical, pyramidal, dome-shaped, and pictorial, or symbolic.

The largest and loftiest of the conical tumuli are apparently monumental, covering at the base the remains of one person, or in rare instances two; and are sometimes increased in altitude by a second interment on the summit of the original mound. Their inconsiderable numbers indicate that they are special and extraordinary memorials, whose growth may be due to the tributes of generations.

¹ Mr. Schoolcraft says that Texas is entirely without aboriginal monuments of any kind; and that neither tumuli, nor remains of ancient ditches, nor attempts at rude castrametation, occur, from the plains of that State and New Mexico, east of the foot of the Rocky Mountains, till the prairie country embraces both banks of the Missouri, and reaches to the plains of Red River, and the Saskatchewan, west of the sources of the Mississippi. (Hist. and Prosp., II. 70, IV. 115. See also respecting the absence of antiquities in Oregon, Washington, and California, Ibid., V. 101.)

The pyramidal tumuli, usually of moderate elevation, but with a broad base and truncated summit, are without remains, and are generally connected with the ceremonial class of enclosures. At the South, temples and the dwellings of chiefs were placed upon them.

Dome-shaped mounds, or *barrows*, tending more or less to a conical form, are very numerous. They may contain a single skeleton, or may be nearly composed of human bones, or they may not have been used for sepulchral purposes. A class of them, within or near enclosures such as have been termed *sacred*, cover altars and sacrificial relics.

The pictorial or symbolical mounds are almost exclusively local, and are nearly confined to the single State of Wisconsin.

All the *relics* which the seats of ancient habitation have yielded are similar in kind to the utensils, ornaments, and implements of existing races.

We may regard it as established, that there are not in the valley of the Mississippi any remains of edifices from which can be inferred a knowledge of the art of working solid materials into permanent and ornamental buildings for religious or secular purposes. There are no ruins of temples or other structures of stone, wrought by the hammer or the chisel, such as abound in Central America. There are no traces of roads and bridges to connect territorial divisions, or facilitate the commerce of an organized state, such as are found in Peru. There are no distinct evidences of arts and manufactures employing separate classes of population, or conducted as regular branches of industry. There are no proofs of the practice of reducing metals from their ores, and melting and casting them for use and ornament—none of a knowledge of chemistry or astronomy. There are no sculptured memorials exhibiting national manners and customs, the religious ideas, or the physical characteristics of the people. In a word, tokens of civil institutions, of mechanical employments, and the cultivation of science and literature however humbly, such as appear among the remains of Mexican and Peruvian civilization, have no positive counterpart in the regions of which we are speaking. Whatever may have been the kind or degree of social advancement attained to by the ancient dwellers in the valleys of the Ohio and Mississippi, those domestic arts and habits of luxury which attend the division of labor and the accumulation of private wealth, had not been sufficiently developed to leave any symbols behind them.

Yet the great enclosures at Newark, at Marietta, at or near Chillicothe, and in many other localities, with their systems of minor embankments, mounds, and excavations, manifest a unity of design, expressive of concentrated authority and combined physical effort. If those structures were produced by a sudden exertion of these agencies, they would require the presence of large bodies of disciplined men, having experience in such labors, and some regular means of subsistence. If they were gradually formed, or brought to completion by labors at various intervals of time, they imply, in addition to unity of power and action, permanent relations to the soil, and habits inconsistent with a nomadic life.

Many of these works are also such as we should expect to see appropriated to the religious ceremonials of a populous community accustomed to meet for the common observance of solemn and pompous rites. Their arrangements correspond

to those which are known to be applied elsewhere to that use. The consecrated enclosures, the mounds of adoration or sacrifice, the sacred avenues approaching guarded places of entrance, are recognized as common features of semi-civilized worship, or rather as exemplifications of the manner in which the instinct of religious reverence has everywhere a tendency to display itself.

The number of works of this character, and the scale on which they are constructed, suggest irresistibly the idea of an organized multitude fond of spectacles, and habituated to public displays of an imposing nature.

It is a circumstance of great significance that the intelligent Spanish and French adventurers and missionaries who first explored (and that pretty thoroughly), the regions where some of the most remarkable of these remains are situated, observed no want of harmony between the social condition of the natives and whatever works of art came to their notice. They evidently regarded the tribes among whom they sojourned as fully capable of producing every form of structure that they saw. It is true they might not have looked with the eyes of antiquaries, or have estimated the age of works overgrown by venerable forests, and therefore their accounts included no archæological problems.

If we proceed according to logical propriety, from the known to the unknown, and compare the historical habits, customs, and arts, of the aborigines, with the vestiges of a more ancient era, we shall at least determine what residuum of mystery is left for future solution.

It has been a common opinion, that articles of ornament and use taken from the mounds manifest a much higher grade of mechanical proficiency than those known to have been made by modern Indians. There is, however, reason to believe that the former are the choicest specimens of art belonging to their period; and because these are found in the tombs of chiefs and upon altars of sacrifice, it does not follow that such were in common use among the people. They do not necessarily indicate any general condition of mechanical or artistic dexterity; but are likely to be the best of their kind, from whatever source they may have been obtained.

In order to estimate correctly the degree of skill in similar handicrafts possessed by the people who were found in occupation of the soil, we must go back to a time antecedent to the decline in all domestic arts which resulted immediately from intercourse with the whites. So soon as more effective implements, more serviceable and durable utensils, and finer ornaments, could be obtained in exchange for the products of the chase, their own laborious and imperfect manufactures were abandoned; and not only their industrial but their military habits underwent essential modifications from the same influence.

All articles of metal wrought or compounded with the aid of fire, whether iron, copper, or silver, and all enamelled or glass ornaments, are now equally regarded as of extraneous if not of recent origin. The highest archæological position assigned to any of them, is that of "*intrusive antiquities*," which may or may not have preceded European settlements in the country.

If from the relics of the mounds are separated those finer sculptures in hard materials, representing tropical quadrupeds, birds, fishes, &c., which, with some mineral substances, must have come from a different latitude, the residue might

have belonged to any savage chief of any savage tribe that the first European invaders encountered.

Mr. Schoolcraft has recorded his *matured* opinion that the antiquities of the United States preserve a general parallelism with the condition of manners, customs, and arts of the later tribes, and seldom or never rise above it (Hist. and Prosp., V. p. 115); and, so far at least as minor works of art are concerned, his conclusion appears to be well sustained. The stone axes, hatchets, gouges, chisels, arrow-heads, and other implements from the mounds, cannot be distinguished from the same articles that everywhere through the country have proved to be almost identical in kind and in form. In pipes there is more variety, yet without much departure from a few established patterns. It was upon these that the aborigines expended their greatest ingenuity. From an Indian burial-place in Canada (where there are no earthworks), have been taken shell-beads, pipes, and copper bracelets, precisely like those from the Grave Creek mound, in connection with articles of European manufacture. (Schoolcraft, Hist. and Prosp., I. pp. 103-5.)¹ From whatever source or sources derived, copper seems to have been in use throughout all America. On the Atlantic coasts it was noticed by all the early navigators from Nova Scotia to Patagonia. (McCulloh's Researches, p. 85.) In New France, copper ornaments, pipes, sea-shells, mica, and flint-stones, were objects of traffic. (Schoolcraft, Hist. and Prosp., V. p. 108.) The excellence of the vases and terra-cottas of the Iroquois is attested to by Mr. Squier in his work on the antiquities of New York, even as compared with the best antique specimens. The Natchez are known to have made fine earthenware of various composition and much elegance of shape, which is described by the Portuguese historian of De Soto's expedition, as differing little from that of Portugal.² Indeed, the art of pottery, with unequal degrees of excellence, was practised by almost every tribe. Very large vessels were made by the Natchez Indians for the collection of salt by evaporation from saline springs. (McCulloh, p. 153.) There is nearly, if not quite, as much of spirit and power of imitation to be seen in the carvings and mouldings in clay of recent native workmanship as in the specimens collected from the sacrificial mounds of the Scioto Valley; and the origin of those ancient deposits is satisfactorily illustrated by modern examples.

Thus the Chippewas were accustomed, after the shedding of blood, to perform a sacrifice of expiation, by throwing all their ornaments, pipes, &c., into a fire kindled at some distance from their huts. (Hearne's Journey, pp. 204-6.) Winslow, in his "Good News from New England," says, "The Nanohiggansets have a great spacious house wherein only some few (that are, as we may term them, priests) come; thither at certain known times, resort all their people, and offer almost all the riches they have to their gods, as kettles, skins, hatchets, beads, knives, &c., all which are cast by the priests into a great fire that they make in the midst of the house." They

¹ Some of the copper implements delineated by Messrs. Squier and Davis were from Canada. Smith. Cont., I. p. 201.

² Conquest of Florida, Paris ed. 1685, p. 242.

attributed their freedom from the plague, which had prevailed in other places, to this custom. (Mass. Hist. Col., 2d series, vol. IX. p. 94.)

The later aborigines have not unfrequently erected mounds and other earthworks. Those formed by collecting the bones of ancestors at certain periods have been in some instances traced to modern tribes. (Jefferson's "Notes on Virginia," pp. 139-43.) A mound was erected over the body of a chief of the Omahas on the Missouri, who died of smallpox in 1800. (Lewis and Clarke, Exp., I. p. 43.) Another was raised, about twenty years since, at Coteau des Prairies, in honor of a young Sioux chief who perished while attempting an exploit of much daring. (Catlin's N. A. Indians, II. p. 170.) In Beck's Gazetteer of Missouri, a large mound is described as having been formed by the Osages within the last half century. It is said to have been gradually enlarged at intervals. (Appendix to Squier's Ab. Mon. of N. Y., p. 107.) The Natchez Indians, after they were driven from their original seats, built a large mound near Nachitoches. (Ibid., p. 108.)

It is among these retreating tribes that we might expect to find the last traces of hereditary customs. Lewis and Clarke mention seeing repeatedly, on the upper waters of the Missouri, villages either occupied at the time, or recently deserted, that were surrounded by earthen embankments, sometimes in the form of a circle. (Exp., I. pp. 54, 92, 94, 97, 112; II. 380, &c.)

Brackenridge, while travelling in the same region, "observed the ruins of several villages which had been abandoned twenty or thirty years, and which, in every respect, resembled the vestiges on the Ohio and Mississippi." (Views of Louisiana, p. 183.) All the numerous and extensive earthworks of New York have been decided by Mr. Squier to be due to the Iroquois. The process of erecting the mounds and enclosures at the South, and the uses to which they were applied, are fully described in the narratives of the early adventurers into that region. The places constructed for the performance of games, or used for such purposes, though the work of earlier generations, are noticed as among the features characteristic of modern habits and practices; and processions, and other public ceremonies, are described as occurring on a scale hardly less imposing than such as we may imagine to have filled the stately avenues and sacred enclosures of the Scioto Valley. (Du Pratz, Hist. of Louisiana, and Bartram's travels in E. and W. Florida.)

We may narrow the circle of unexplained antiquities by tracing the cordon of less mysterious vestiges surrounding that great centre of ancient habitation which is composed of States bordering on the Ohio.

East of the Alleghanies, from the Carolinas to New York, the country is nearly destitute of such remains. In New York they assume a character so nearly resembling those on the Ohio as to have been classed with them, until Mr. Squier decided by exploration that both relics of art and traces of occupancy were "absolutely *identical* with those which mark the sites of towns and forts known to have been occupied by the Indians within the historical period." The earthworks of northern Ohio are described by the same writer as corresponding with those of New York. No higher claim can be asserted for the remains north of the same line (omitting for the present the emblematic mounds of Wisconsin) and east of the Mississippi. Beyond the Mississippi the works on the Missouri, the Platte, and the Kansas,

do not differ from the character of Indian structures. Further south, where such remains occur, they are comprehended in the class to which the accounts of early adventurers apply. The same may be said of those in the entire region south of Tennessee. In fact the Natchez, according to Du Pratz, maintained that their nation once extended as far north as the Ohio.¹

Within the boundaries thus described lies a region from which no voice has come to tell when, why, and by whom, its structures were reared. They differ less in kind than in degree from other remains respecting which history has not been entirely silent. They are more numerous, more concentrated, and, in some particulars, on a larger scale of labor, than the works which approach them on their several borders, and with whose various characters they are blended. Their numbers may be the result of frequent changes of residence by a comparatively limited population, in accordance with a superstitious trait of the Indian nature, leading to the abandonment of places where any great calamity has been suffered; but they appear rather to indicate a country thickly inhabited for a period long enough to admit of the progressive enlargement and extension of its monuments.

What mighty cause of destruction anticipated by a few centuries the mission of the whites it is not easy to conjecture. That the people perished by plague or war is not more improbable than that they transferred themselves and their institutions to some yet undiscovered locality. The terrible appellation of "The Dark and Bloody Ground" applied to Kentucky, may relate to these distant events; and the fact stated by President Harrison, that the attractive banks of the Ohio, on either side, were without permanent occupants at the advent of European settlers, may have been owing to a lingering instinct of apprehension on the part of the native race.²

There are two other classes of remains whose origin is involved in equal obscurity—the emblematic earthworks of Wisconsin, and the so called "Garden Beds," found in the same State, and also in Michigan and Indiana. The last have hitherto been but incidentally noticed in this paper.

It is known that the culture of maize, tobacco, and a few kinds of vegetables, was practised by the aborigines throughout the United States, wherever the climate and soil were propitious, though in a careless and irregular manner; but the garden beds referred to are laid out with all the neatness and symmetry of modern husbandry. They cover large surfaces of prairie land, and as they sometimes cross the low mounds and pictorial embankments, they are supposed to have been formed after these had ceased to be objects of reverence. Mr. Schoolcraft and Mr. Lapham have fully described them.

We desire to stop where evidence ceases; and offer no speculations as to the direction from which the authors of the vestiges of antiquity in the United States entered the country, or from whence their arts were derived. The deductions from scientific investigations, philological and physiological, tend to prove that the

¹ London ed., 1774, p. 313.

² The region in which Kentucky is embraced was known to the Indians by the name of the Dark and Bloody Ground. (Filson's Disc. and Settl. of Ky., p. 4.)

American races are of great antiquity. Their religious doctrines, their superstitions, both in their nature and in their modes of practice, and their arts, accord with those of the most primitive age of mankind. With all their characteristics affinities are found in the early condition of Asiatic races; and a channel of communication is pointed out through which they might have poured into this continent before the existing institutions and national divisions of the parent country were developed. Fortuitous arrivals, too inconsiderable in numbers and influence to leave decided impressions, may at intervals have taken place from other lands; and geographical facts, and atmospherical phenomena, may serve to explain why the New World remained so long a sealed book to the cultivated nations of Europe, or was only known through the vague intimations and rumors alluded to in history, such as the chances of the sea, and indefinite reports from barbarous regions and peoples would be likely to bring to their ears.

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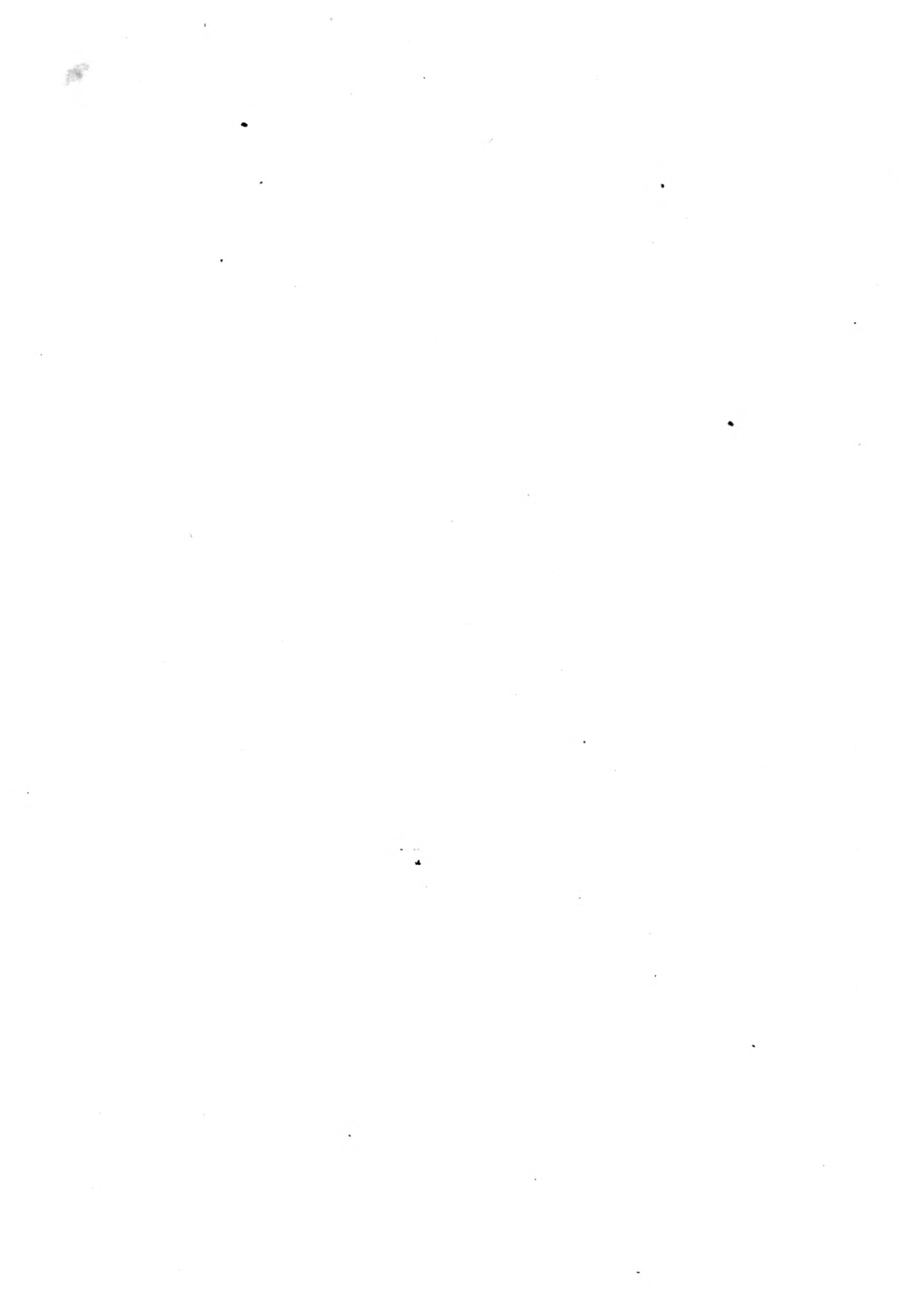
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